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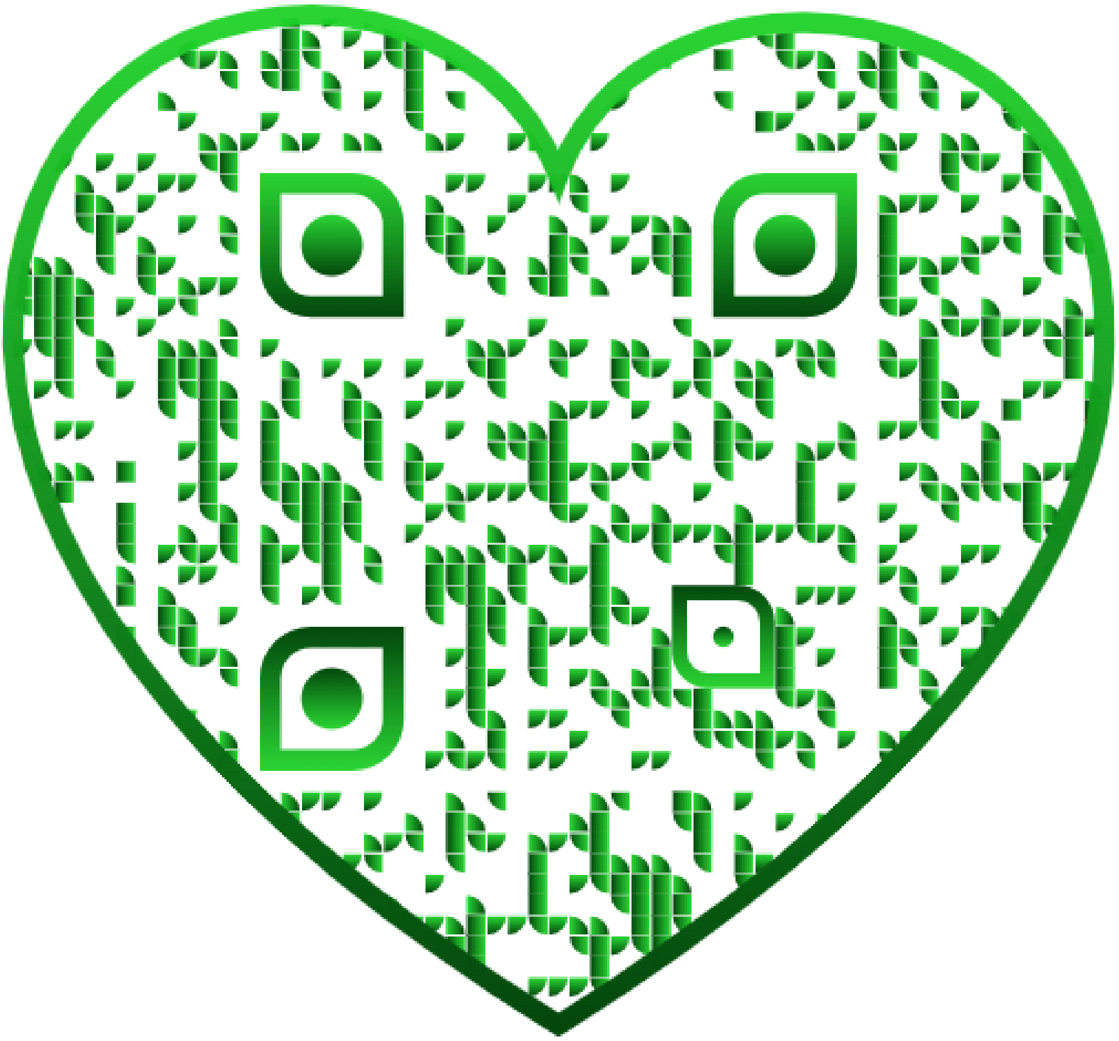

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Many of us dream about having a nice home with a little backyard where we can keep a few chickens and grow a vegetable garden. And keeping healthy and happy hens these days is pretty easy, if you've covered a few bases. You just need to know a few things first!

Explore your options by turning to page 4 and read about how you can start keeping chickens wherever you live, be it the suburbs and even within city limits. Learn about the different breeds that might do well in a small flock (page 16). And when it comes to housing, know your options.

No matter where you live, chickens require quality nutrition to remain productive. Depending on your goals, what you feed your flock may change. (Learn more on page 38.) And while you're at it, avoid those big mistakes many chicken-keepers make and keep you chickens stressfree with our stress-buster tips (page 78).

Use this publication as your springboard and dive deeper into the information that is available. A great resource is *Chickens* magazine (subscribe at ChickensMagazine.com). Each bimonthly issue is packed with tips and information on raising and keeping chickens.

As you move along your chicken-keeping adventure, we wish you the very best of cluck! — *Hobby Farms Editors*

BACKYARD CHICKENS
2025

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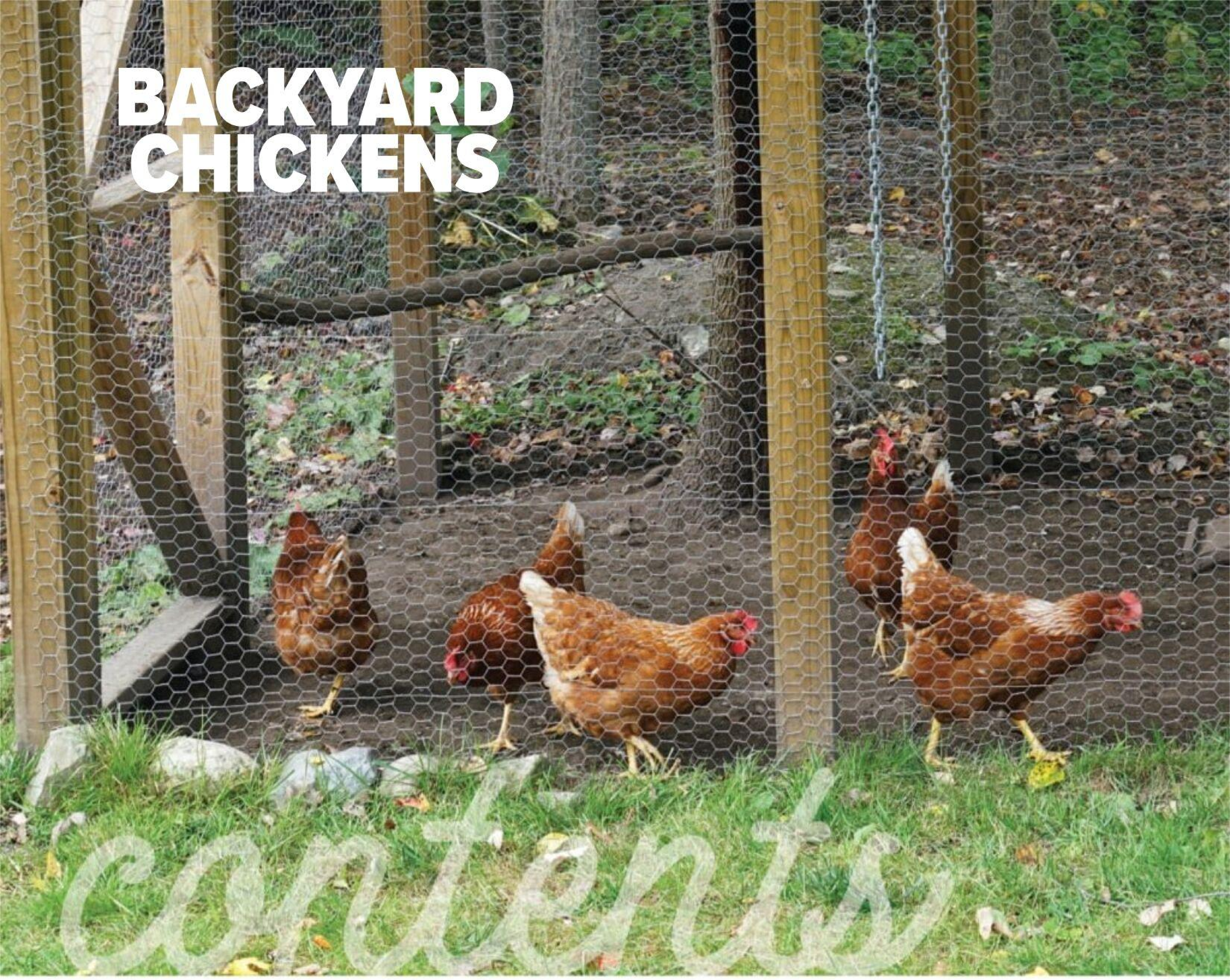
BACKYARD CHICKENS



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PICKIN' Chickens

Before you purchase new birds, be sure to get the right breed for the right job.

BY ASHLEIGH KRISPENSE

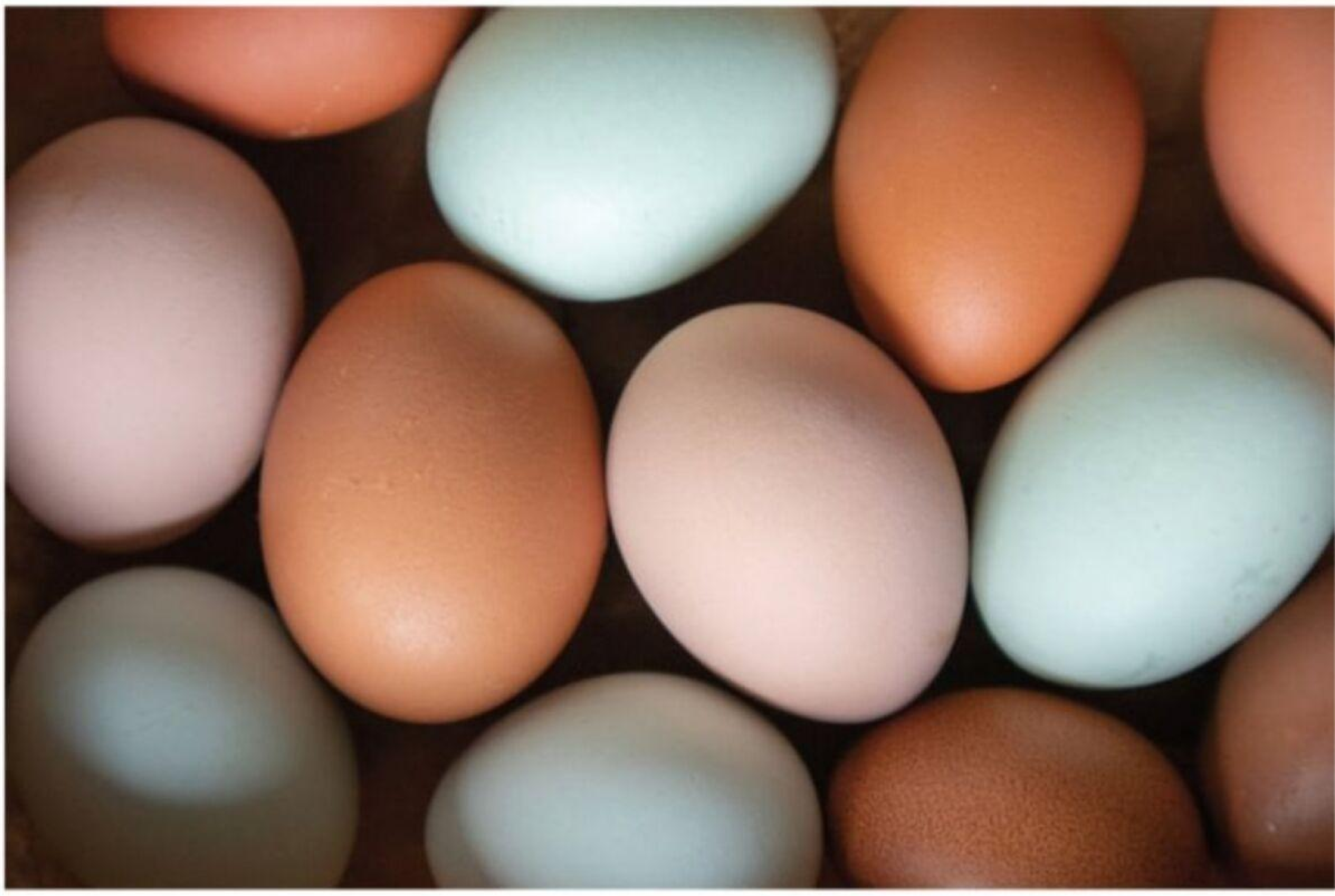
Thirty odd years ago, my grandparents and great-grandparents could be found in the front yard dressing and preparing hundreds of chickens to be shared between their two families. The freezers would be stocked for the upcoming winter and thoughts of homemade chicken noodle soup and fried chicken would tantalize their minds. A self-sustaining lifestyle wasn't a hobby or wishful notion; it was a reality of life. If you wanted to eat, you had to work for it.

Throughout my own childhood, the brooder house was never empty and fresh eggs filled the fridge that sat in the mudroom. We had a variety of poultry and waterfowl, so from a young age we had sampled the eggs from turkeys, geese, ducks and, of course, our faithful laying hens.

A few special roosters and hens seemed to have personalities of their own. At one point, my next younger brother and I had each claimed a rooster — Roovert and Doovert, we comically dubbed them — and they where the two unfortunate souls to be chased around the hill by children eager to capture and stroke their beautiful, colored feathers.

My mother was a fan of dual-purpose birds in her henhouse. She preferred to have a breed of chicken that allowed for the roosters to be butchered at a young age and the hens to grow old while supplying us with a steady stream of delicious eggs.

Even to this day, chickens are a staple back at my folk's home. Over the years, there were a variety of breeds that graced the threshold of the brooder house, but the flock today mainly consists of a mixture of Buff Rocks, Rhode Island Reds, Red Sex Links and Golden Laced Wyandottes. Later, when I was on my own, I started my own flock — a mix of Dominiques and Golden Lace Wyandottes. A heritage breed with the disposition of the calmest bird I've seen, the Dominique has become a favorite in my own henhouse.



Different breeds lay different colored eggs. Choose different breed hens for a multicolored egg basket.

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WHAT QUESTIONS TO ASK?

When you go to purchase your chickens, you'll find that there are a variety of questions you'll want to answer before trying to pick a breed.

- What do you want these chickens for? To raise for meat (fryers), eggs (layers), both (dual purpose) or just as ornamentals?
- Will they be show birds and exhibited at poultry shows or just for your own homestead?
- Will this breed be able to thrive in the climate you live in?
- Do you want full-sized chickens or their smaller counterparts, bantams?
- How serious of an egg-layer are you looking for?
- And just for fun: What color of eggs would you like?

KNOWING WHICH BREED TO BUY

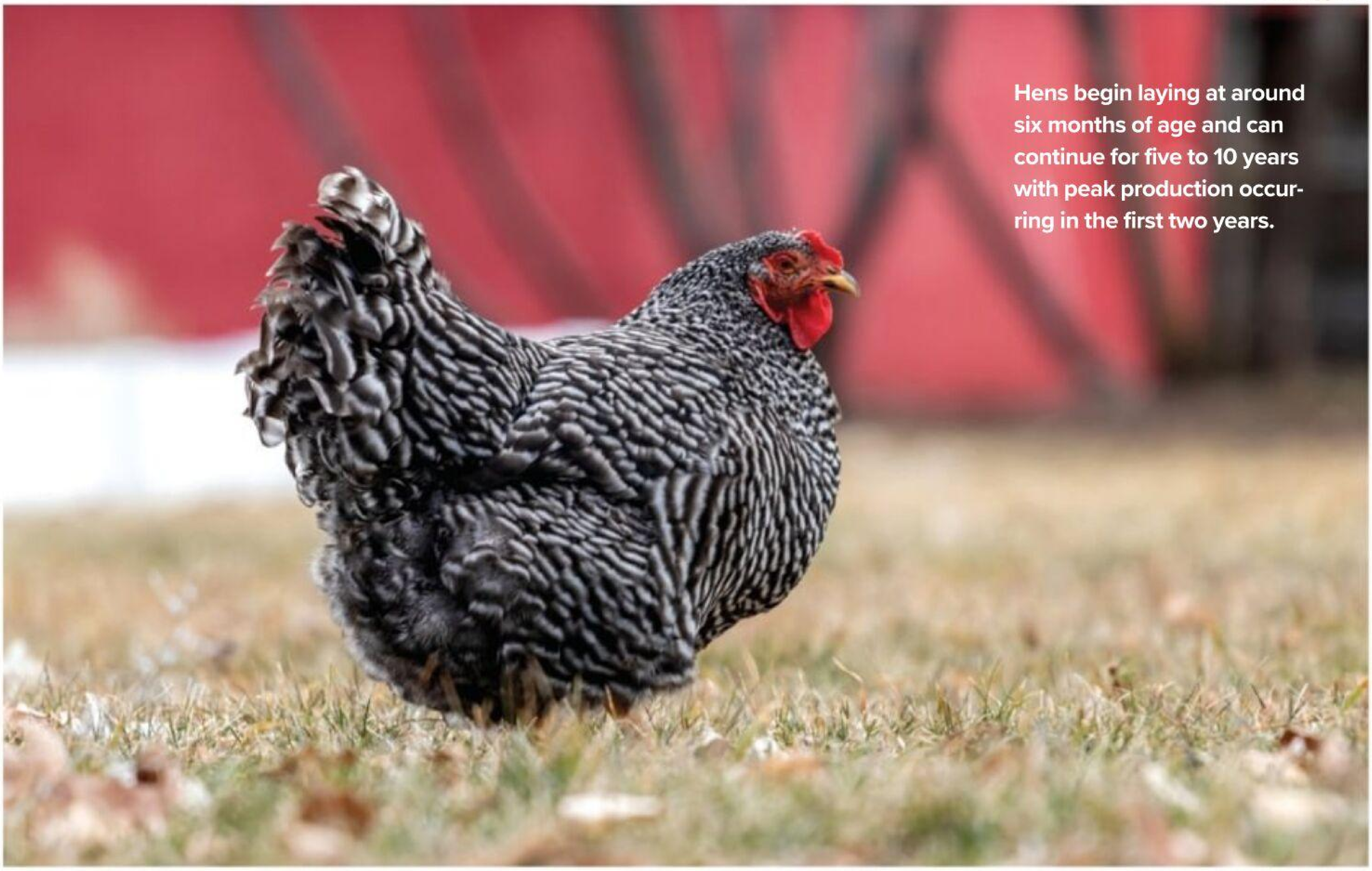
When choosing which breed of chickens to purchase, a little research can go a long ways. One of the first things to decide will be what purpose you want the birds to serve.

FRYERS are chickens with stocky bodies that fill out with muscle and are fed and grown with the intent to butcher them at a young age. These chickens don't lay as many eggs as layers or dual-purpose breeds.

LAYERS are chickens that have a more lean body build and lay an average of an egg a day. They're not intended for butcher but, rather, to spend a majority of their life producing eggs. The age a hen starts producing at and the number of eggs you get a day will depend on the breed of chicken you choose. An excellent layer should average between 250 to 280 eggs a year.

DUAL-PURPOSE chickens are meant to provide a bit of both worlds; they'll have a stockier body than layers and thus be able to be butchered, but the hens will also produce more eggs than fryers, making them able to be kept for years for egg production.

If you decide to go for a dual-purpose breed rather than strictly an egg layer, don't expect them to produce the same number of eggs. They'll still lay an adequate amount, but because they're meant to fulfill two needs (meat and eggs) their body will also spend energy on building muscle as well. You might also find that dual-purpose breeds tend to be slower growing than their commercial counterparts, the fryers. Rather than a downside, some people find their slower growth to be a healthier alternative to some fast-maturing fryers.



Hens begin laying at around six months of age and can continue for five to 10 years with peak production occurring in the first two years.

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Consider the costs of feeding, housing and caring for a flock of chickens before you get too many.

ASHLEIGH KRISPENSE

A FEW MORE QUESTIONS…

Sometimes people have questions they feel are too simple to ask. Don't be that person! How else can we learn if we won't ever start at the basics? Here are a few things you might have wondered about.

DO YOU NEED A ROOSTER FOR YOUR HENS TO LAY EGGS? Nope, you don't need a rooster for your hens to lay eggs. Roosters simply fertilize the eggs, the hen does all the work of making them. She can do that just fine without a rooster. If you think you'll want a self-sustaining flock in the future (meaning you'll hatch your own eggs, whether in an incubator or stuck under a broody hen), then you'll need a rooster.

DO EGGS COME IN DIFFERENT COLORS? Yes! Eggs can come in a rainbow of colors, they aren't all brown or white! There are varying shades of blue, green, pink, white, brown, etc. For brown eggs, look at the Buff Rocks, Golden-Laced Wyandottes, Rhode Island Reds, etc. For a more colorful egg such as blue or green, look at the Ameraucanas, Cream Legbars, Olive Eggers and so on.

WHAT IS THE DIFFERENCE BETWEEN A "SINGLE" COMB AND "ROSE" COMB? A single comb is how a lot of people imagine chickens — with a single flap of skin standing up on top of their head. A rose comb is a more flat and wide piece of skin that looks rather bumpy and lays down close to the head. If you live in a cold climate, a breed with a rose comb might be somewhat more desirable as it won't get frostbite as easily.

HOW MANY EGGS WILL MY HEN LAY? An average layer should produce between 250 to 280 eggs a year. When chickens are just pullets, they will probably lay an egg every three to four days. As they mature, their eggs will grow larger and they should be producing two eggs every three days. (I typically would look for an egg a day from my full grown hens, give or take a few.)

Besides the constant entertainment factor that chickens offer, why else would you want to go through the effort of purchasing them, building a shelter, buying feed and all of the other work it takes to maintain a healthy flock? Chickens have become increasingly more popular as people begin to question the health of commercial poultry offered in the supermarkets and rising prices. Many people also tend to enjoy the feeling of security that is offered by growing their own food, whether it's in the form of a garden, chickens or cattle.

The longer you have them, the more woven into your daily life and habits your chickens will become. Kitchen scraps and yard waste can be diverted from the landfill and sent straight to the backyard. In return, you'll be given fresh, deliciously rich eggs. If left to free-range, hens will help keep your yard's pests in check. Things such as ticks, fleas, mosquitoes, grasshoppers, grubs, aphids, and even small reptiles are liable to end up on the wrong end of a hen's beak!

If you enjoy gardening, chickens can be challenging pets to keep. While they might sneak a few bites of a tomato or dig a tender onion, they'll mix your topsoil and organic matter as they scratch and kick around the dirt. Garden pests will begin to dwindle and both you and the hens will reap the benefits of summertime eggs. Just consider it their way of repaying any missing produce!

EGG LAYERS

There are a vast number of different breeds of chickens being offered today, but here are some of the most common and practical layers that you could consider adding to (or starting) your flock with.

Rhode Island Reds are a dual-purpose breed and were developed in the state of Rhode Island. They are excellent layers and will produce a large, dark brown egg. Some of the hens can go broody and make good mothers. These are a great option for new or experienced chicken-keepers and easy to care for.

Red Sex Links are a hybrid and interestingly enough, can't reproduce purebred offspring. They are the result of a red cock (New Hampshire or Rhode Island Red) being mated with a silver-based hen (such as a White Leghorn,

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Rhode Island White, Silver-Laced Wyandotte, etc.). They are tremendous layers, producing large, brown eggs and are quite hardy in a variety of weather environments.

Barred Plymouth Rocks are another great dual-purpose breed of chicken that was developed in Massachusetts. An extremely popular breed, the hens lay brown eggs, can turn broody, yet overall are hardy, calm birds.

While their coloring is similar to their relative, the Dominiques, the single comb of a Barred Rock will help you differentiate between it and the Dominique, who has a rose comb.

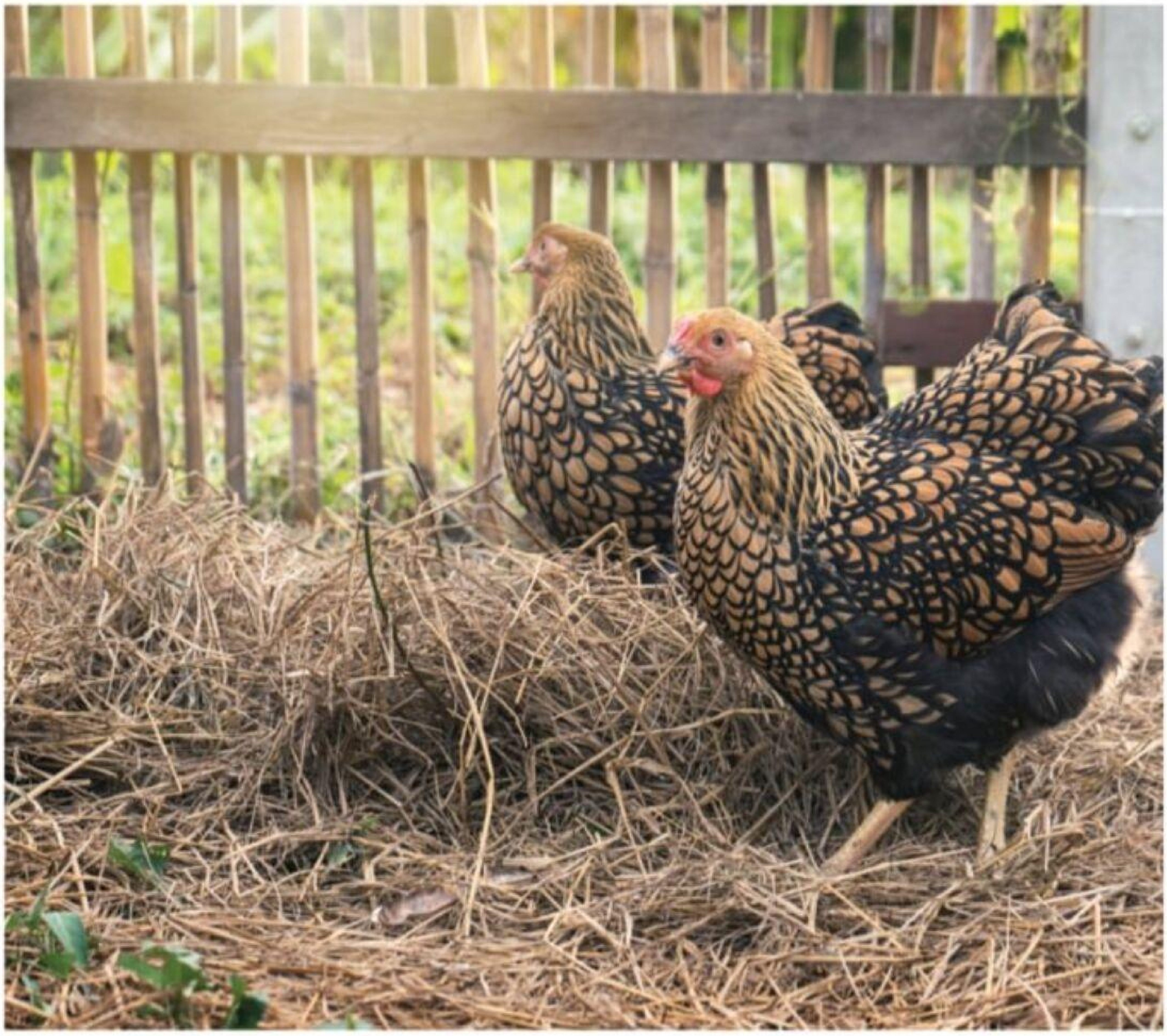
Leghorns are an active, lively breed that was developed in Italy. They can come in a variety of colors, two comb variations, and either bantam or large breed size. Leghorns are hardy and excellent layers of large, white eggs.

Golden Laced Wyandottes get their name from a Native American tribe that was collectively know as Wendat or Wyandot. The original variety of Wyandotte was the Silver Laced, but today there are multiple different varieties including Blue, Black, Buff, Columbian, Partridge, Silver Penciled and White. They are good layers of brown eggs and can become broody. They are a rather fluffy-looking chicken, thanks to their short tail and back and loose feathering.

Australorps, developed in Australia, are another dual-purpose breed. They originated from Orpingtons and eventually came to be known as Australorps. Australorps are excellent layers of brown eggs, have a single comb, and a docile disposition.

BEYOND THE BREED

Chicks can be bought from a variety of places. Local farm-supply stores often host "chick days" and will have stock tanks full of poultry you can purchase and take home right that day. Many hatcheries also offer the option to order online and have the poultry shipped straight to your local post office for pick-up. Local breeders will also sometimes have poultry for sale. If you decide to buy from an individual, try to get a look at their flock and the living conditions before you purchase any



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The Wyandotte breed gets its name from a Native American tribe.

Depending on their origin, breeds become adapted for different climates.

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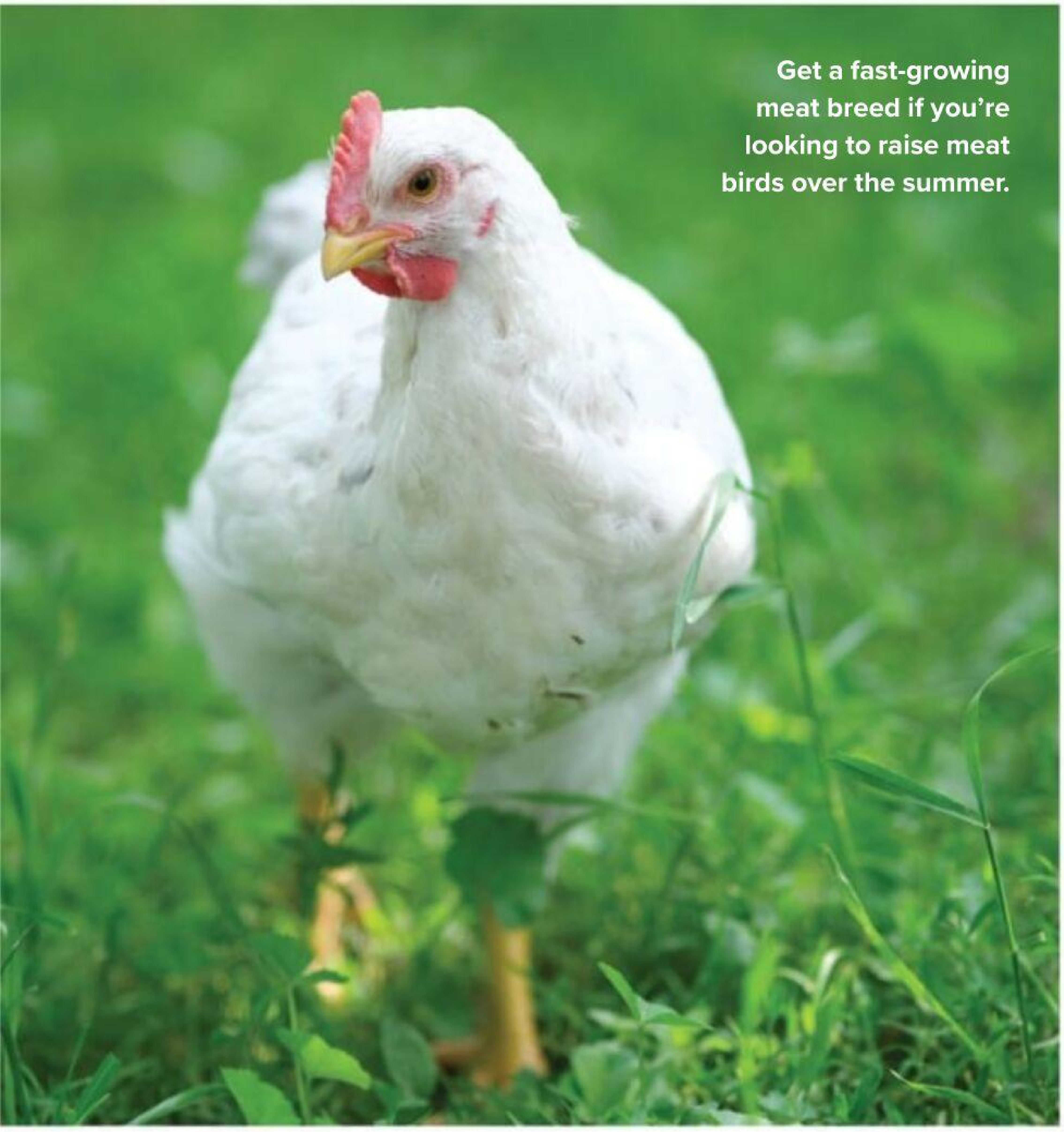

Get a fast-growing meat breed if you're looking to raise meat birds over the summer.

birds. This will give you an idea of the history of the birds, and what problems you could run into in the future. Here's a quick run-down of how chicks are often offered for sale:

STRAIGHT RUN: The chicks have not been sexed (had their gender checked). You are buying a random assortment of cockerels and pullets.

COCKERELS: This is a selection of chicks that is supposed to be males only. Don't be surprised if a pullet or two slips by once in awhile!

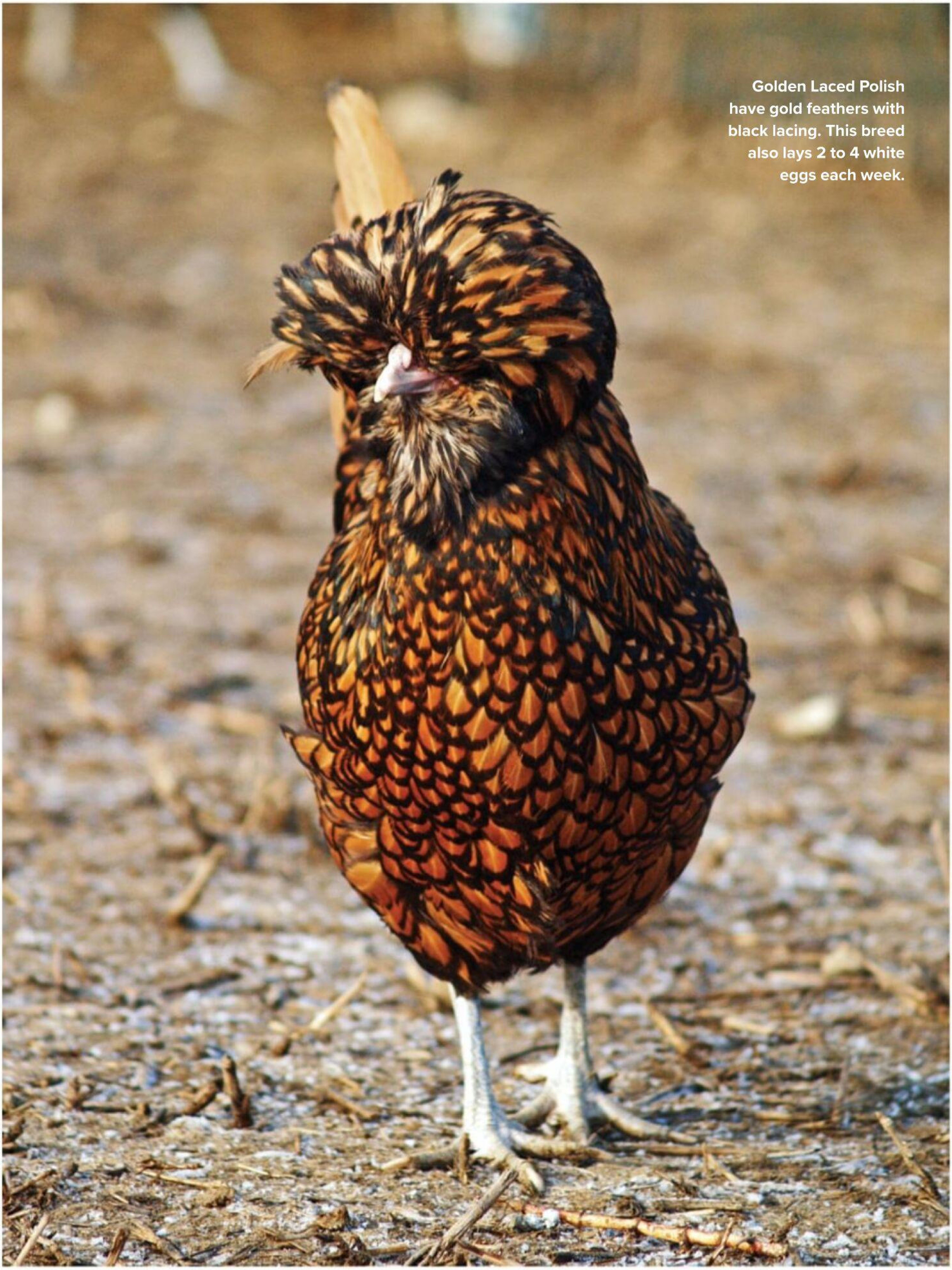
PULLETS: These chicks have been sexed and determined to be pullets (or females) only.

Keeping chickens can be quite an adventure at times, but if you're ready for a little backyard companionship and fresh eggs, they're the way to go! Be careful on the number of poultry you get for your space, but don't forget to have a little fun with it. A basket of multi-colored eggs could look beautiful sitting on your kitchen table!

Ashleigh Krispense lives in Central Kansas with her husband, Kolton, and their menagerie of critters.

CINNAMON QUEENS

Cinnamon Queens are top-notch hybrid layers with two notable attributes: They're meaty enough to raise as tasty, tender fryers or broilers, and they're autosexing — meaning the sexes are easily discernible directly from the egg. Cinnamon Queens are also nonbroody, so they don't take timeouts to raise chicks. Pullets begin laying sooner than heritage breeds, producing 250 to 320 large to extra-large brown eggs a year. They're calm, friendly birds and great free-rangers, but they adapt well to henhouse living, too.



Golden Laced Polish have gold feathers with black lacing. This breed also lays 2 to 4 white eggs each week.

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Breeds to CONSIDER

We rounded up some of the best breeds to add to your flock.

BY SUE WEAVER

We've picked a list of our favorite chicken breeds in different categories to fulfill your every backyard need. From the best layers to the best meat breeds, from the most docile to the most ornamental, plenty of different birds exist from which to choose.

BEST LAYER, WHITE EGGS (MODERN)
CALIFORNIA WHITE

This hybrid chicken breed was developed in California by breeding White Leghorn hens to California Grey roosters. They are mostly white with a few black specks. California Whites are fast-maturing, hardy, long-lived and prolific, with hens laying roughly 300 large to extra-large white eggs per year, right through the winter months. Hens weigh about 5½ pounds, while roosters weigh roughly 7.

These quiet and docile birds tolerate confinement extremely well and make excellent foragers.

BEST LAYER, WHITE EGGS (HERITAGE)
LEGHORN (NONINDUSTRIAL)

Spritely and active, Leghorns lay 280 or so medium-to-large white eggs per year. Originating in Northern Italy in ancient times, they've been a favorite American layer since they arrived on our shores in 1852. Hens are nonsetters that lay well year-round. They're lithe and lean — roosters weighing around 6 pounds; hens, 4½ — so they're strictly layers, not dual-purpose (providing meat and eggs) birds.

They come in an array of colors — American Poultry Association-approved Black, Buff, Dark Brown, Light Brown, Silver and White — and a bantam size.

Leghorns are good layers of white eggs, laying an average of 280 per year and sometimes reaching 300 to 320.

SLOWMOTIONGLI/STOCK.ADOBE.COM

SLOWMOTIONGLI/STOCK.ADOBE.COM

Leghorns are ultrafertile, vigorous, hardy and heat tolerant. While they tolerate confinement very well, they're noisy, flighty and strong fliers, so they don't do well in urban situations.

BEST URBAN LAYER: EASTER EGGER

Easter Eggers (pictured above) aren't an APA-recognized breed. They descended from Araucanas and Ameraucanas and come in an array of colors, comb types, and with or without muffs, beards and ear tufts.

The Easter Egger's claim to fame is its sweet, docile nature and the fact that it lays blue-, green-or olive-colored eggs. This medium-sized, healthy, quiet, heat- and cold-hardy, friendly breed tolerates confinement well, making it an ideal urban chicken.

Hens seldom become broody, and they lay in the neighborhood of 200 to 250 eggs per year.

BEST LAYER, BROWN EGGS (MODERN) RED STAR

Also known as Golden Comets and ISA Browns, these sex-linked hybrids are produced by breeding Rhode Island Red or New Hampshire roosters with White Plymouth Rock, Rhode Island White, Silver Laced Wyandotte or Delaware hens.

Newly hatched pullets are red, and cockerels are white. Roosters remain white while hens grow white-flecked, reddish-brown plumage.

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Roosters weigh 8 pounds; hens, 6. Pullets begin laying at about 22 weeks of age and lay roughly 300 brown eggs per year.

Most Red Stars are active but docile. Some strains tend to be flighty.

BEST LAYER, BROWN EGGS (HERITAGE): AUSTRALORP

Australian poultry fanciers developed Black Australorps in the late 1800s using Black Orpingtons from Britain as the foundation stock. A typical Australorp hen lays about 250 large, light brown eggs per year.

Australorps come only in black. They're hardy, moderately early maturing, and some hens become broody.

Roosters weigh around 8½ pounds; hens, 6½, so they're meaty enough to qualify as dual-purpose birds. Bantam versions are available, too.

BEST WINTER LAYER NEW HAMPSHIRE

New England chicken breeders developed this breed using Rhode Island Red foundation stock, selecting for fast-feathering, early maturity, hardiness and winter-laying ability. New Hampshires have deep, broad bodies and are medium-to-light red.

Hens weigh about 6½ pounds; roosters, 8½, so they make fine meat chickens, too. A bantam version exists as well.

New Hampshire hens lay about 200 light-to-medium brown eggs per year, especially during the coldest winter months when other breeds tend to stop laying. These calm, friendly birds do well in confinement, too.

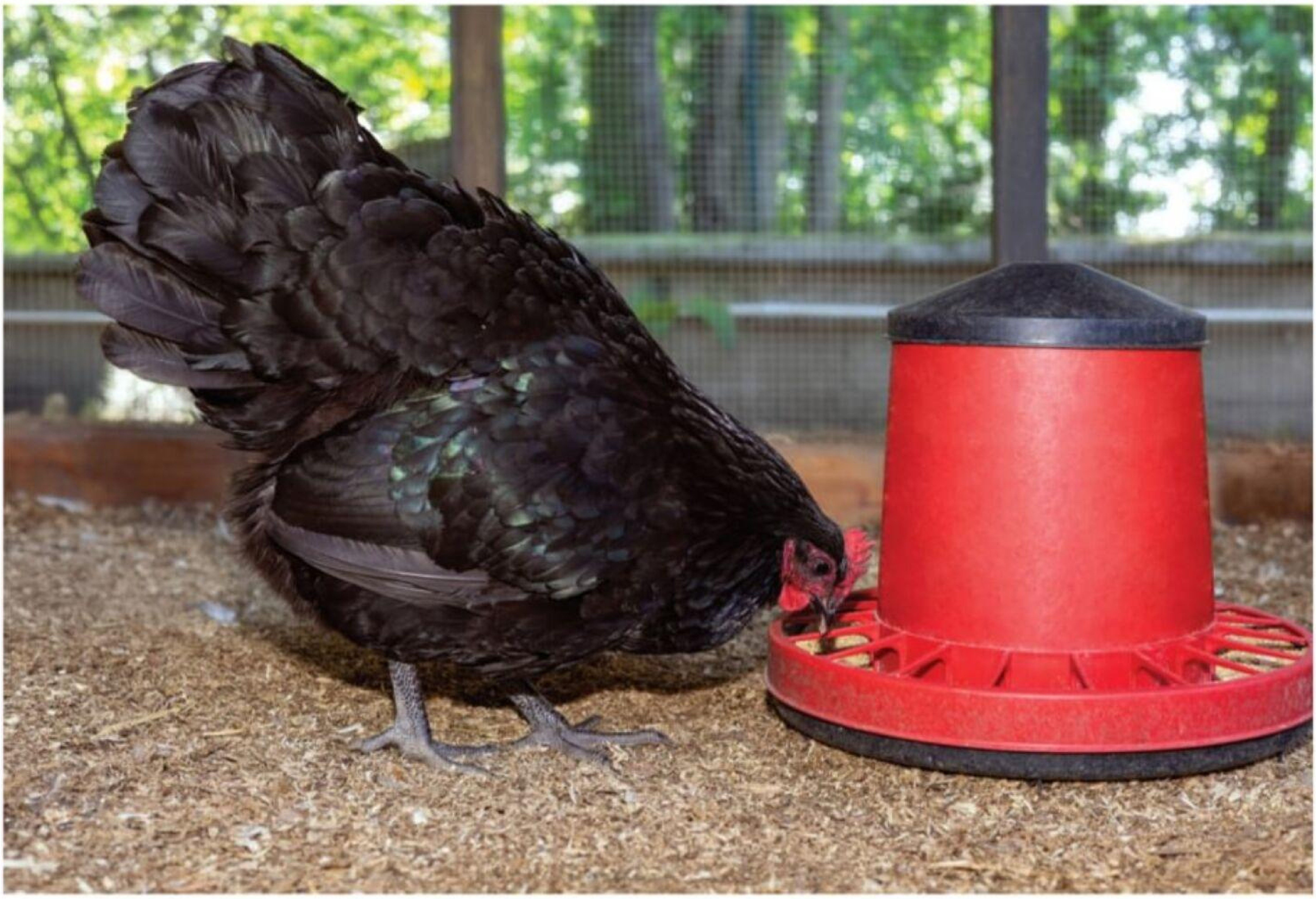
BEST MEAT (HERITAGE) ORPINGTON

William Cook, a coachman living near the town of Orpington in Kent, England, developed this breed in the late 1800s by crossing Minorca roosters with Black Plymouth Rock hens, then breeding their offspring to the Langshan chicken. His goal: Create a large, plump, fast-growing, winter-hardy meat bird with fine eating qualities.

Today's Orpingtons are just that.

Hens are also reasonable layers of large, brown eggs at 175 to 200 per year.

Australorps are a medium-weight breed with close-fitting feathers.



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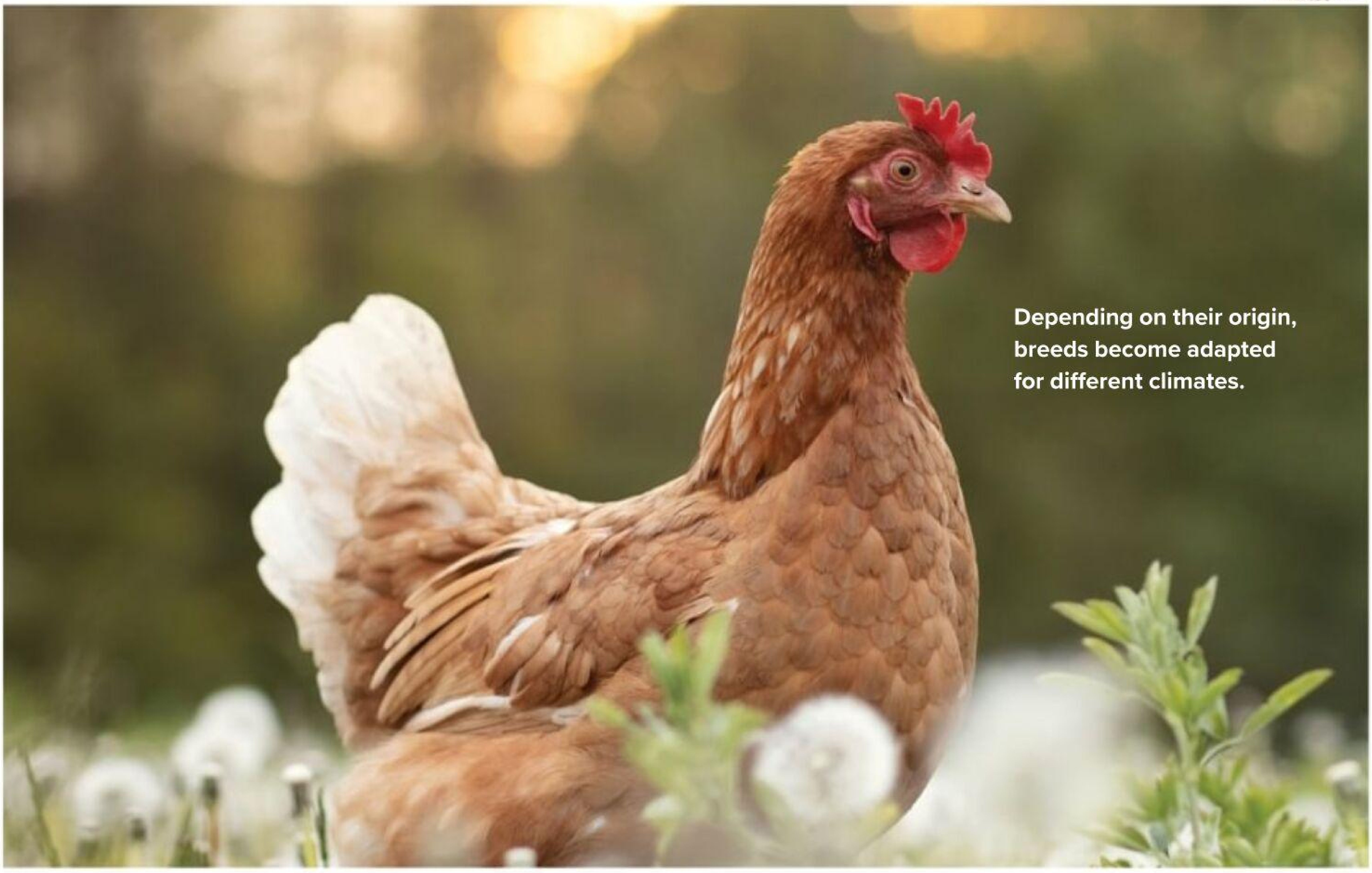

Depending on their origin, breeds become adapted for different climates.

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Roosters weigh a hefty 10 pounds; hens, 8. Calm and friendly chickens, Orpingtons adapt equally well to free-range or confinement situations. The APA recognizes Black, Blue, Buff and White in the large-fowl and bantam versions.

BEST BEGINNER'S BIRD
PLYMOUTH ROCK

The Plymouth Rock is an all-American, dual-purpose chicken developed in New England during the 1800s. Its exceptionally calm and friendly demeanor, hardiness, and fine laying and table qualities make it a great bird for first-time backyard chicken-keepers.

Plymouth Rocks come in a number of colors: Barred, Black, Blue, Buff, Columbian, Partridge, Silver Penciled and White. Roosters weigh about 9½ pounds, with hens tipping the scales at 7½ pounds. Bantam Plymouth Rocks exist as well.

Hens lay about 200 large, light-to-medium brown eggs per year, and they tend to be fine broodies. They make excellent foragers that adapt well to confinement.

BEST ANCIENT BREED: ASEEL

Developed in Pakistan and India as fighting chickens, the Aseel is now celebrated for its unique appearance and friendly demeanor toward humans. America's first Aseels came from India in the late 1800s.

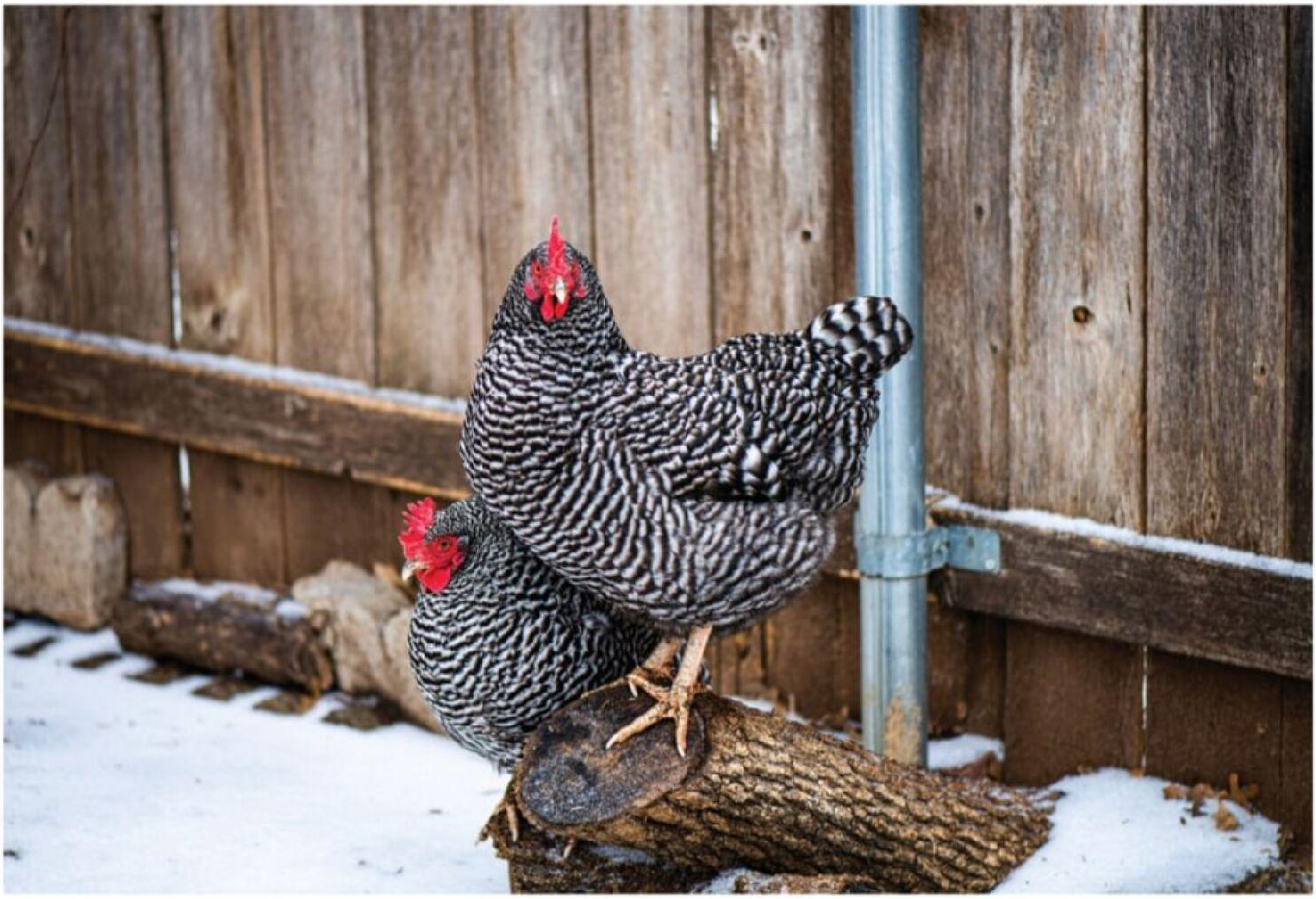
Their muscular bodies are held in a distinct, upright manner. Aseels have broad skulls, menacing eyes and strong, curved beaks. Hens are poor layers of small, brown eggs but are superlative broodies that fiercely guard their chicks.

Aseels tend to fight with other chickens but are docile and friendly toward people. Roosters weigh about 6 pounds; hens, 5.

BEST MEAT (MODERN)
CORNISH CROSS

The Cornish X, also known as the Cornish Cross Rock and Cornish Giant, is America's quintessential fast-maturing hybrid meat chicken. Cornish Xs are white with yellow skin, producing broad breasts and plump thighs with superb eating quality.

Barred Plymouth Rocks are easily recognizable by their single comb and distinct black-and-white barred feathers.



ASHLEY/STOCK.ADOBE.COM

Male and female Aseels are naturally aggressive toward other breeds, as well as, their own kind. This bird is beautiful but not for a beginner backyard chicken-keeper.

ALI HANIF SUMBUL/STOCK.ADOBE.COM

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Incredibly fast growing, they can weigh 6 pounds at 6 to 8 weeks of age, or they can be grown out to 8- to 10-pound broiler size. Due to their heavy weight and rapid growth, stress-broken legs, heatstroke and heart failure are fairly common.

Cornish Xs aren't very active and are docile in nature, making them easy to house and handle.

BEST BROODY (LARGE FOWL)
COCHIN

An old Chinese breed that came to America in the 1800s, the Cochin chicken is so broody that even roosters occasionally set eggs, including the eggs of ducks, turkeys and geese.

They are huge — roosters weigh 10 to 12 pounds; hens weigh as much as 9 — and they're profusely feathered with fluffy plumage, including their legs. Smaller bantam versions are available, too.

Hens lay up to 140 medium-to-large tinted eggs per year. Cochins are slow growers but make a lot of meat; they're best harvested at 15 to 16 months of age as 12-pound capons. They're nonflyers and one of the quietest, gentlest breeds, making them excellent pets as well.

BEST ORNAMENTAL
SULTAN

Known as Serai Taook in their native Turkey, Sultans have more unique characteristics than any other breed of chicken, including a V-shaped comb, crest, beard, large nostrils, low-carried wings and erect bearing, feathered legs and toes, and five toes on each foot.

Sultans are white with blue shanks and toes. Roosters weigh 6 pounds; hens, 4. They are active but friendly. Hens lay 150 to 200 small, white eggs per year.

Brought to America in 1867, the APA included Sultans in the organization's first *Standard of Excellence* (an annual publication describing recognized breeds) in 1874. The Livestock Conservancy, an American farm organization with a mission "to protect endangered livestock and poultry breeds from extinction,"classifies the Sultan chicken breed status as

The Cochin chicken is a beautiful Asian breed and a gentle giant.

BECKY STARES/STOCK.ADOBE.COM

"Critical," meaning there are fewer than 500 breeding birds in the U.S., with five or fewer primary breeding flocks (50 birds or more), and an estimated global population of less than 1,000.

BEST FOR SOUTHERN CLIMATES: CATALANA

One of several Mediterranean dual-purpose breeds that produce well in hot, humid climates, this chicken originated in Spain, and the APA recognized the breed in 1949.

Catalanas come in one color: buff with a black tail.

Roosters weigh about 8 pounds; hens, 6. Catalanas mature early. The Livestock Conservancy states that "the cockerels and cull layers are noted for having very good carcasses and succulent meat … Cockerels are also used in the production of quality capon in Spain."

Hens lay about 200 medium-size, white or tinted eggs per year and seldom become broody. Active and somewhat flighty, they forage well but don't adapt the best to close confinement.

BEST GENTLE ROOSTER FAVEROLLES

If you'd like to add a rooster to your flock but don't want one that will chase you around the yard, try a Faverolle. These cute, fluffy chickens have beards, muffs, feathered legs and five toes on each foot. They are exceptionally docile and friendly, and they love attention. The Faverolles is an excellent choice for hobby and urban farmers and children. Although the breed has a curious and active nature, farmers with gardens need only a short fence to keep the Faverolles from exploring.

Developed near the French village of Faverolle, this breed arrived in America in the early 1900s. Hens lay 180 to 200 medium-to-large tinted-to-light-brown eggs per year. Roosters weigh 8 to 10 pounds and hens, 7½ to 9 pounds, so this chicken makes a meaty, dual-purpose breed.

BEST BROODY (BANTAM) BELGIAN BEARDED D'UCCLE

Originating in Belgium in the late 1800s, the Belgian Bearded D'Uccle (pronounced *dew-clay*) has a beard and

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muffs that extends around its head as well as feathered legs, giving it an owl-like appearance. The APA recognizes Black, Golden Neck, Mille Fleur, Mottled, Porcelain, Self Blue and White colors. They are true bantams. Roosters weigh about 26 ounces; hens, 22.

Hens are moderate layers, producing about 150 tiny, white or tinted eggs per year. But they're peerless broodies and sometimes used to hatch quail and pheasant eggs. Friendly and calm, Belgian d'Uccles make wonderful pets. Roosters are rarely aggressive.

BEST FOR CONSERVATORS
HOLLAND

The Livestock Conservancy states that Hollands are the rarest living breed of American chicken. That, along with their stellar dispositions and fine laying and meat qualities, makes them the perfect bird for anyone who'd like to help preserve critically endangered poultry.

Developed during the 1930s in New York, Hollands originally came in Barred and White, but the White variety appears to be extinct. Hens lay 200 to 250 large white eggs per year. Roosters weigh around 8½ pounds; hens, 6½. Hollands are calm, friendly and cold-hardy, and hens make good brooders. They free-range with ease and forage most of their own feed during the summer. But they also do well in confinement.

Bantams are available, too.

BEST DUAL-PURPOSE (HERITAGE)
RHODE ISLAND RED (NONINDUSTRIAL)

Developed in Massachusetts and Rhode Island in the late 1800s, this chicken might be America's best-known breed. Early breeders wanted a bird that could lay 200 to 300 large, medium-to-dark-brown eggs each year through the cold winter. They also dress out nicely as a table bird.

RIRs are rich red with black accents. Old-style roosters weigh about 8 pounds; hens, 6 ½. Bantam sizes are available. Commercial Rhode Island Reds are smaller and lighter colored and don't go

The cuddly Faverolles breed has great dual-purpose qualities and can be trusted around children.

PAULDANIEL/STOCK.ADOBE.COM

broody — a specialty of the old-fashioned, nonindustrial strains.

BEST PET: SILKIE

When you think pet chickens, think cute, compact, friendly bantam Silkies (pictured on page 16-17). This ancient breed, developed in the Far East (most likely China), comes in an array of colors in bearded and beardless varieties. All have fluffy, furlike plumage, compact walnut combs, turquoise earlobes, black skin and bones, feathered legs, and five toes on each foot.

Roosters weigh about 4 pounds; hens, 3. Silkie hens lay only a few tiny, tinted eggs per week in season, but they make fantastic broodies, hatching chicken, quail, pheasant and waterfowl eggs with ease.

BEST FOR NORTHERN CLIMATES CHANTECLER

Monks at the Cistercian Abbey in Oka, Quebec, Canada, developed the White Chantecler in the early 1900s, selecting for good temperament, vigor and the ability to produce well during harsh Canadian winters.

Later, in the 1930s, an Alberta poultry breeder developed a partridge-colored version.

Chanteclers are extremely cold hardy, and hens lay about 200 large brown eggs, even in the height of winter. Calm and friendly, they love to forage and do well in confinement.

Chanteclers are meaty, with large breasts. Roosters weigh about 8½ pounds; hens, 6½. Bantam versions are available, as well. In 1999, Quebec officially recognized the Chantecler as a native Quebec breed.

GENTLE GIANT: BRAHMA

The Brahma is a gentle giant. Quiet, calm and even-tempered, this breed is exceptionally cold-hardy, and the hens are great winter layers. Because of their feathered legs and shanks, they're not best for excessively wet or muddy regions (moisture can cling to the feathers, leading to frostbite on toes).

A Rhode Island Red hen and her Australorp flock mate scour the farm for tasty snacks.

LUGOSTOCK/STOCK.ADOBE.COM

Otherwise, the Brahma is a great addition to the backyard flock, especially in northern regions. Despite their large size, they handle confinement well and are not as active as other breeds that prefer to forage; this makes them great for smaller spaces, too. The breed's easy-going temperament makes it a perfect chicken for kids.

BEST BRAND MASCOT: WELSUMER

The Welsumer is a beautiful breed. Hens sport a partridge feather pattern in a rainbow of browns and golds, and the Welsumer rooster isn't too hard on the eyes either. He was made famous as Cornelius the rooster on the Kellogg's Corn Flakes box in the company's 1950s ad campaign and is usually the bird that springs to mind when you think of a rooster.

Temperamentally, the Welsumer breed is an intelligent, active and friendly breed that forages extremely well, offering the chicken keeper an opportunity to save on feed costs during some seasons. Hens also lay beautiful chocolate brown eggs that are sometimes speckled.

BEST STATE BIRD: BUCKEYE

The Buckeye chicken gets its name from its state of origin, the Buckeye State of Ohio, where Nettie Metcalf — the only woman to develop a recognized American breed of chickens (so far) — cultivated this deeply hued chestnut bird. Although the Buckeye and the Rhode Island Red originated around the same time and were recognized as breeds in the APA *Standard of Perfection* in the same year, they should not be confused with one another; they are separate breeds.

Robust and meaty, the Buckeye is active, preferring to forage for food and likes to have some room to roam but can adapt to confinement. Hens lay a medium-sized brown egg, and the breed is dual-purpose. The Buckeye is currently categorized as "Threatened."

There are more than 400 breeds and varieties of poultry recognized by the APA and the American Bantam Association, be it large and small bantam chickens, ducks, geese, turkeys and guinea fowl.

No matter what you're looking for in a chicken, there's something exactly right for you. These are just a few of the best!

Brahma have big bodies but also easy-going temperaments.

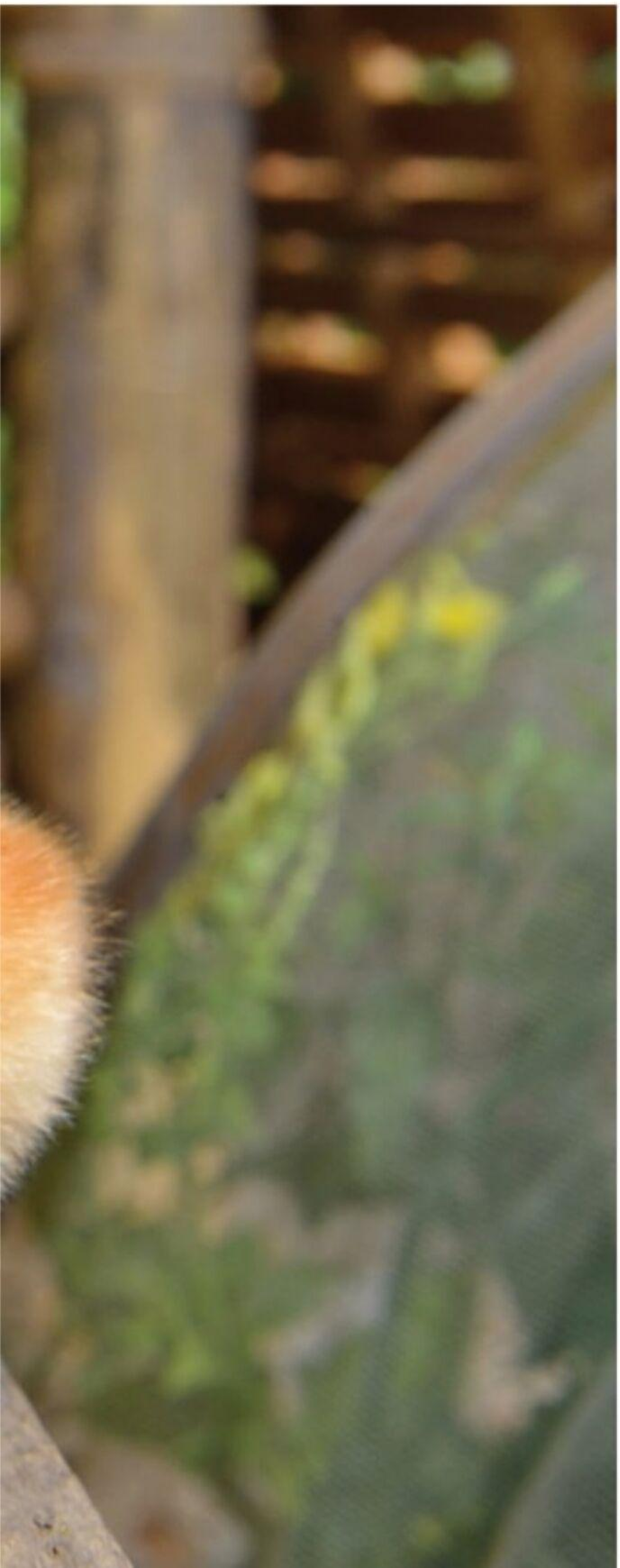
The Welsummer is a friendly, intelligent and easily handled bird that loves to free-range and forage for food.

CAVAN/STOCK.ADOBE.COM

DAY-OLD

DUTIES

BY LESA WILKE



You've ordered the breeds you want, and the package has arrived; now, the real work begins.

Raising day-old chickens to create or expand your backyard flock is an extremely fun and rewarding experience. However, it's important to prepare for the job.

Once your baby poultry arrive, they'll require frequent monitoring and care for the first six to eight weeks. Someone needs to be available for them daily during those critical first weeks. But it's easy to successfully raise them, if you get the right equipment and follow the practices outlined here.

BRINGING HOME BABIES

Raising baby birds is a relatively inexpensive and easy way to get started with chickens. They're typically much cheaper to purchase than older birds, and several large, reputable hatcheries in the U.S. exist that specialize in shipping day-old chicks.

These hatcheries will ship just a few birds of one breed or combinations of different breeds if you want variety in your flock. You can also typically order straight-run (both male and female) chicks or just female chicks if you don't want roosters. When possible, it's best to order birds from the nearest hatchery to minimize stressful postal system shipping times. The hatcheries will ship the chicks to your local post office where you can pick them up.

Many feed-supply stores also sell locally hatched, day-old chicks in the spring. Buying locally hatched birds is usually safer, because they won't suffer the stress of shipping.

Mail-ordered chicks are excited to finally be home and unpacked. Newly hatched chicks don't need food or water for two to three days after coming out of their shells at the hatchery, so they typically travel very well by USPS.

However, breed selection options are normally quite limited compared to the hatcheries. Of course, if you already have chickens, you can always hatch your own eggs to raise.

SETTING UP THE BABY ROOM

Baby chickens need a constantly warm and draft-free environment, they need to be protected from predators, and they create a great deal of dust plus droppings. Consider carefully when choosing where to raise them.

If you raise them indoors, it'll be easier to keep them warm and protected, but select a location where dust and dirt won't be a problem. If you choose an outdoor location, the mess isn't such an issue, but keeping them warm and protected is.

Choosing when to raise them is also important. The first time we raised day-old chicks, we started them in the fall in an outdoor barn stall. The barn was great for dealing with the mess; however, because temperatures were falling at night, it was very difficult to maintain a constant temperature in their brooder with a heat lamp.

If raising them outdoors, it's much easier to raise them in the springtime as temperatures are rising. That way, you don't need to adjust the heat source as frequently, and by the time they're 6 to 8 weeks old, it's warm enough that they don't need the heat lamp.

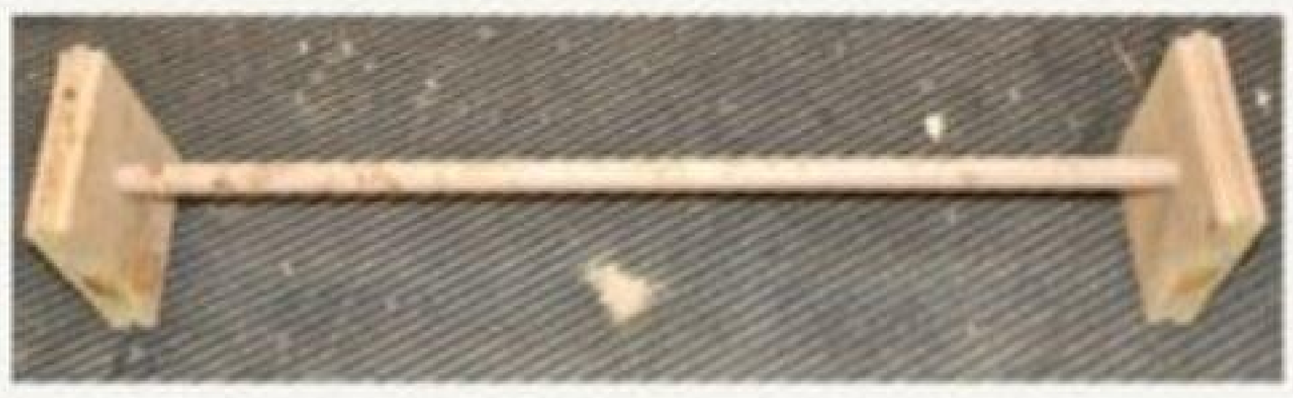
A container that provides good ventilation is generally used as the brooder to raise baby poultry. Initially, it should be sized to provide about ½ to 1 square foot per chick, but they grow quickly; the brooder will need to increase to about 2 square feet per chick as they grow.

The wall height of the brooder is also something to consider. Baby chicks fly well by 2 or 3 weeks, so the walls should be pretty high. Or, you can plan to use screening over the brooder to keep

ROOSTS FOR CHICKS

Roosts for chicks aren't absolutely necessary, but providing them does help keep waterers and feeders clean. If you give them roosts, they may hang out there rather than on a feeder or waterer.

A simple roost of whatever length needed can be constructed by taking two 4-by-4-inch, 1-inch-thick boards, drilling a 1-inch round hole in the middle of each, and inserting a 1-inch round dowel between the boards. Even easier, find appropriately sized branches outdoors and add them to the brooder as roosts.



LESA WILKE

Even chicks like to roost, but make sure your roosting bar isn't too high off the ground.

Chicks are mostly feathered and ready to leave the brooder box at around 4 to 6 weeks.

the chicks inside. Finally, the brooder doesn't need to be anything fancy because it's going to get dirty and dusty. Cardboard boxes, old furniture or plastic storage containers are commonly used.

As an example of sizing, we used a discarded television armoire set-up in a barn stall for our first brooder. We took the drawers and shelves out and laid it down on the ground to create the container for the chicks. Initially, it was 3-by-5-foot and 2-foot high for 30 chicks, but we had to extend it to 8-foot by the third week. The chicks could also fly out by that time, so we added screening to the top. By week five, we released them into the entire 10-by-10-foot barn stall so they'd have sufficient room.

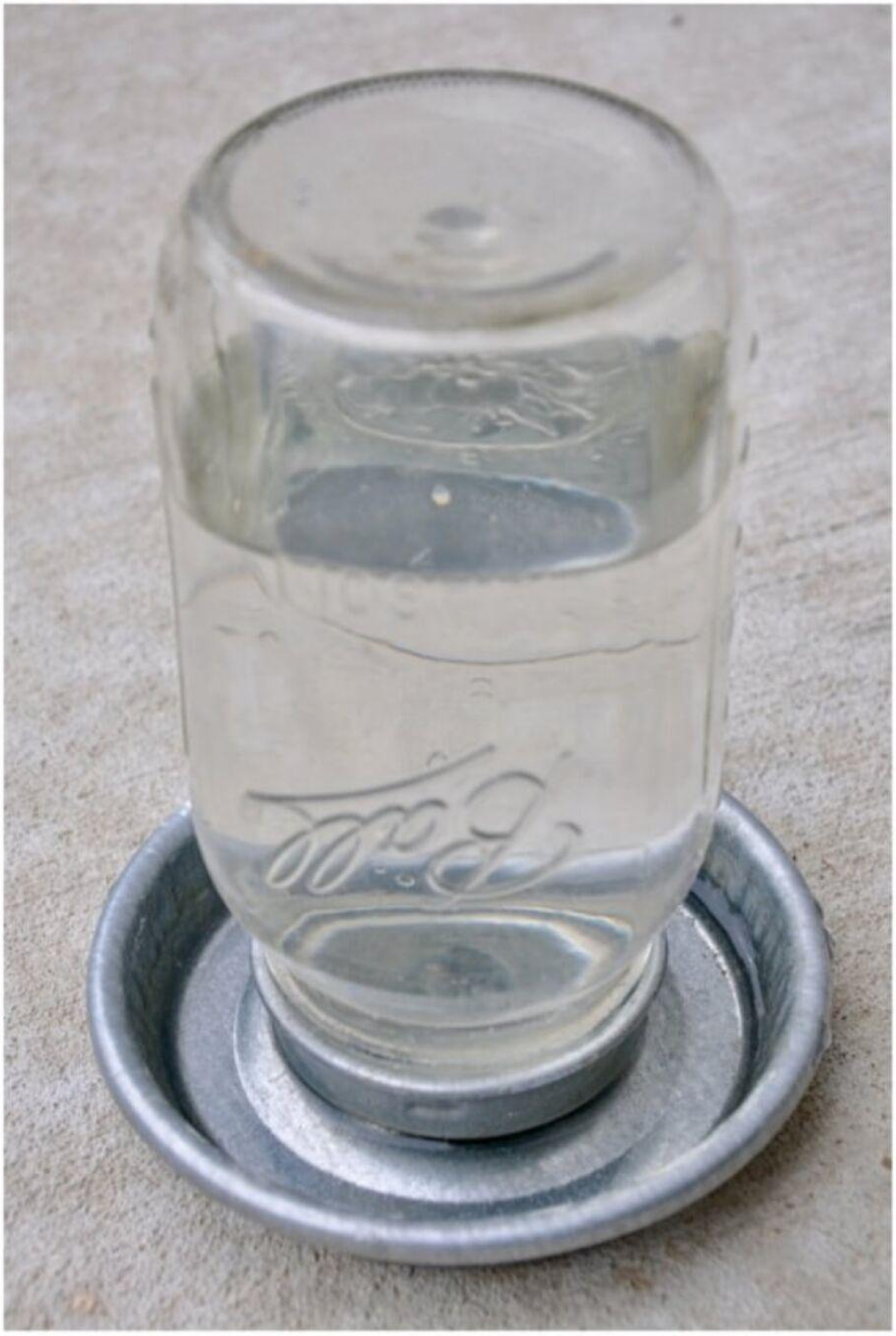
SOCIALIZING YOUR SWEETIES

As your chicks grow, it's a good idea to socialize them by handling them daily and giving them a few treats. (They tend to love grapes!) That way, as they reach maturity, they'll be familiar with being handled and will run toward you rather than away. Over time, it makes taking care of them much easier and friendly birds are just more enjoyable.

KEEPING CHICKS WARM

Day-old chicks need to be kept at a constant 95 degrees Fahrenheit their first week, 90 degrees the second week, and so on (reducing the temperature 5 degrees per week) until they're 6 to 8 weeks old and have feathers to keep themselves warm. A 250-watt, red infrared heat lamp suspended over the middle of the brooder is typically recommended as a heat source to achieve this. The red light helps prevent pecking issues and is less stressful to chickens than white. It's critical that the chicks are kept warm 24/7, so it's a good idea to have a spare heat lamp bulb on hand.

By placing a thermometer on the floor of the brooder underneath the heat lamp, you can monitor the temperature and adjust accordingly. If the temperature in the brooder is too cool, then adjust the heat lamp down a bit, and vice versa. When the chicks are cold, they'll huddle under the heat lamp whereas when they're hot, they spread out and avoid the lamp. By monitoring the thermometer, you can make sure they have the proper temperature for their age, and they can huddle together or spread out as they find necessary.



Provide water to your chicks in a canning jar fitted with a metal or plastic watering base, which you can pick up at most farm-supply stores.

LESA WILKE

As the birds get older, it'll be obvious that some chicks are developing faster and can tolerate colder temperatures. By watching the thermometer, you can maintain the recommended temperature in the middle of the brooder for the slower birds, and the bigger birds can find their comfort zone by moving away from the lamp.

WATERING THE CHICKS

The first thing that day-old birds need when they arrive is water, so it's important to have appropriate chick waterers. Baby chicks can easily drown or hurt themselves if inappropriate waterers (too large) are used. There are simple, inexpensive watering bases available that screw onto mason jars and are recommended for baby chicks. In regards to watering, veterinarian Melissa Holahan, creator of Goat Melk Soap Co. and owner of Chubb E. Acres Farm (www.chubbeacresfarm.com) says one of the top problems she see is dehydration. "I like to use 1 to 2 teaspoons of sugar or honey added to the water, and I use lukewarm water for the first few days," she says.

The chicks will put pine shavings in their waterers, so they need to be cleaned and refilled several times daily. Elevating the waterers by placing them on blocks can help keep out the pine chips, but be sure not to elevate it so high that the birds can't reach the water. Remember not to place the chicken waterers directly under the heat lamp as the water will get too hot for the chicks.

FEEDING THE CHICKS

There are also feeders sized specifically for chicks. Again, disasters can happen if the right equipment isn't used, so it's best to utilize properly sized feeders. For feed, either medicated or unmedicated "chick starter" feed is recommended for the first eight weeks. These feeds have been formulated specifically to give growing chicks everything they need.

Holahan recommends using medicated feed to prevent coccidiosis.

BEDDING FOR THE BROODER

A highly absorbent bedding material is needed inside the brooder because chicks grow so quickly and create so much waste. (The brooder needs to be cleaned out frequently, too.) Pine shavings are a popular bedding choice; however, the day the chicks arrive, they often confuse the pine shavings for food.

Veterinarian Melissa Holahan, creator of Goat Melk Soap Co. and owner of Chubb E. Acres Farm (www.chubbeacresfarm.com), advises using paper towels for the first two to three days. "Once they figure out where the feed is, switch to large style pine chips," she says. "Paper towels aren't a good long-term solution — not absorbent enough — but it works for the first several days."

Sand, newspaper and cedar shavings should generally be avoided for chicken brooder bedding. Cedar fumes can damage chickens' delicate respiratory systems, sand gets very hot under a heat lamp — plus, they tend to eat it — and newspaper is too slippery and not sufficiently absorbent.

"I always feel that prevention is way better than treatment," she says. "Since the chicks are growing babies, they should get as much of the starter feed as they want, but shouldn't get too many treats".

WHEN THEY ARRIVE

Get everything set-up and running the day prior to receiving baby chicks. That's the time to get the brooder organized and the temperature inside stabilized at 95 degrees. When the chicks arrive, immediately move them into the brooder, and make sure they're finding the water. If none of the babies are drinking, pick an energetic chick and carefully dip its beak into the water. The others will learn by seeing chicks drinking. Follow the same procedure to make sure they're eating.

Once all your chicks appear to be eating and drinking, they should be checked for "pasting up." This is a condition where their droppings cake over their vent area, preventing them from passing more droppings. The condition is fatal if not remedied, so it's important to check the chicks daily for the first week.

You can remedy "pasting up" by taking a paper towel, dunking it in warm water and gently using it to remove the caked droppings. It's important to do this gently as it's easy to rub off their fuzzy down and then other chicks may peck on the area. If the blockage isn't coming off, dunk the chick's back end in warm water until things loosen up.

In each batch of day-old chicks, no matter how good the care is, it's likely that a few won't make it. It's critical that they're kept at the right temperature, have clean water, get a proper diet and are protected from predators. Even with the best care, typically some losses occur; some chicks simply are not hardy at birth. However, the rewards for putting in all the work involved with raising day-old chicks are healthy, friendly, sociable chickens in your backyard that will provide you with high-quality eggs and years of entertainment.

Lesa Wilke raised Nigerian Dwarf goats, Buckeye chickens, honeybees and produce on her small farm in northeastern Ohio. Her writing inspired new homesteaders on their journey to more sustainable lifestyles.

Get everything set-up and running the day prior to receiving baby chicks. That's the time to get the brooder organized and the temperature inside stabilized at 95 degrees Fahrenheit.

SASAPANCHENKO/STOCK.ADOBE.COM

10 Top TIPS

by Kristina Mercedes Urquhart

First Few Days

Timing is a critical piece in the puzzle of life. That's never clearer than when we incubate, brood and raise young chicks. Nothing quite prepares you for the speed at which they grow; within 21 days, a simple fertile egg produces a living chick. Four weeks from hatching, they have real feathers and lots of sass. Twelve weeks further on, some breeds are sexually mature and might be laying their own eggs. Getting all the elements set up and in proper order for beginning this cycle is paramount.

1. TIME IT RIGHT

Incubating and brooding chicks requires special timing and climatic circumstances. There's a reason "spring chicks" are the cliché: The weather is neither too hot nor too cold to either ship fertile eggs or chicks, and by the time the birds are fully feathered — four to five weeks from hatching — the weather is warm enough for them to be outdoors without a heater. These are important factors to consider when you purchase your fertile eggs. The remedy is simple: Do the math. Find your last frost date in your area and count backward four to five weeks, taking into account the distinct seasonal tendencies of the region where you live. Outdoor temperatures should be about 55 degrees Fahrenheit at the coldest by the time your chicks are moved outside.

If you hatch with a broody hen, you won't have much to worry about, as a hen knows what she's doing. She probably won't go broody until spring, so you can usually follow her lead.

2. ORGANIZE INFORMATION

Do all your research ahead of time and know what to expect. Consider finding a mentor or learning from an online forum or group. Organize your equipment, too. Order an incubator, heat lamp, chick supplies — such as a feeder and water fount — and learn how to use them before you have chicks.

3. BODY HEAT

Heat is among the most important elements of proper chick care, whether the birds are incubated or naturally hatched. When eggs are hatched under a broody hen, she covers those elements herself. Her size, weight, body temperature and movement work together naturally to create a perfect incubating environment. When you hatch chicks under a broody hen, trust her. She will do a wonderful job.

New chicks require lots of attention and temperature management.

JENNIFER/STOCK.ADOBE.COM

4. PROVIDE HEAT

When you hatch your own birds in an incubator, the temperature and humidity play a crucial role in helping the developing chicks form. They're extremely susceptible to cold temperatures and must be kept in a warm brooder with consistent temperatures offered by a reliable heat lamp.

For the first week, chicks require 95 degrees. For the second week, they require 90. For the third, they require 85. This progression continues until they are fully feathered. It's easy to purchase a heat lamp made just for chicks from a farm-supply store or through an online supplier. These special lamps use a red bulb designed to stay lit 24 hours a day, which doesn't stress out the birds and lets them sleep. The lamps have guards for safety and clamps for ease of use.

5. BIGGER IS BETTER

Once chicks have hatched, the brooder should be clean and in working order. The general rule of chicken housing applies to chicks as well: When in doubt, always go bigger. The number of birds hatched from a given clutch varies a lot. You can't tell how many birds will hatch. Plan space for the max number of birds you want to hatch, but keep your expectations flexible.

6. KEEP IT CLEAN

Chickens, large or small, make a mess of a space quickly. If you began brooding your birds indoors, you'll quickly find they kick up a fair amount of dust that settles in every crack and crevice. Keep them out of main living areas or difficult-to-clean rooms of a human dwelling. Basements, garages, mudrooms, outdoor sheds, barns and coops are all effective options — as long as they have adequate heat and protection from predators.

7. SAFETY

It seems obvious, right? But predators are sneaky, and chicks are incredibly vulnerable. With zero defenses of their own, chicks rely on their mothers (or adoptive mothers — you) to keep them out of harm's reach. Harm might look adorable and unsuspecting, too, like a small child or a housecat. Take your own special circumstances into consideration when setting up the brooder: How can you offer the new chicks the most comfortable (warm) housing in a safe area?

8. CHICK ESSENTIALS: FOOD

Those rapidly growing bodies need special nutrients, and the best form of feed for our domestic chicken is an organic chick feed. Labeled "starter" or "grower" feed, this ration is designed to provide all the nutrients a growing bird needs. But what about letting chicks forage for food naturally? It would be lovely to allow our domestic birds to act as wild as possible, but the reality is that humans have intricately bred the wild jungle fowl to be a meat-producing, egg-laying machine. After generations of breeding, our domestic birds' bodies grow rapidly and simply do best with a primary ration of commercial feed.

9. HEALTH CONCERNS

Another consideration is the health of your birds after the basic needs are met. Several common ailments plague young chicks, and whether you encounter them or not, it's good to be prepared.

From the first day after hatching, monitor chicks for something called "pasted vents." Stress, travel, shipment or other environmental factors can cause chicks to develop pasted feces on their vents. Unless it's removed, they'll be unable to defecate, and they will surely die. Check each chick daily, and remove stuck-on feces with a warm, wet paper towel.

In the long term, you might choose to vaccinate your birds. Decide what you'll do before you order or hatch chicks, because vaccinations are usually effective only when administered on the first day of life.

10. HAVE FUN

Chicks grow incredibly fast, and each one will have such a sweet personality all its own. Enjoy getting creative in the early days. Establish a social media page or a special hashtag and share your new adventures with friends and family. You'll influence and educate others in the process and be thrilled in just a few short months to come back and look at how far you've all progressed.

Kristina Mercedes Urquhart is the author of The Suburban Chicken.

ZIGZAGMTART/STOCK.ADOBE.COM

Once incubation begins, it takes just 21 days on average for an egg to hatch.

FEEDING YOUR FLOCK

JANIS APELS/SHUTTERSTOCK.COM

What you feed, how you supplement and when you treat will make all the difference for your chickens.

BY KRISTINA MERCEDES URQUHART

As with most growing animals, a flock of laying hens requires different nutrients at different life stages and throughout different seasons of the year. Your flock's extra dietary and digestive needs will largely be met by the variety of supplements provided in addition to daily feed. You'll need to think about stimulation, too. Nothing wins over a flock of chickens like a good treat.

Let's look at how to provide a balanced daily feed ration first, allow some forage time, and then shamelessly enjoy bonding and building trust with your chickens by offering fun treats — in moderation, of course. That's the secret every chicken keeper knows: The way to a chicken's heart is through her crop.

FOR STARTERS

Eating — that's what chickens do best. Nature has expertly designed them to convert a variety of edible plants, insects, seeds and other living things into fuel for their daily activities. And chickens are certainly happier when they're able to realize their true nature. Foraging is a very basic part of being a chicken. It's their livelihood.

So why have modern chickens been converted to a diet consisting almost solely of cheap grains? Well, unlike ruminants such as cattle (whose seven stomachs evolved to digest grasses best), chickens are fairly good at converting grains and legumes, such as corn and soy, into the protein of their meat or eggs. But just because they can doesn't mean they should.

When lacking a varied diet (and in particular, the greens found on pasture), a chicken's egg and meat quality plummets; the good omega-3 fatty acids decline, and the omega-6 fatty acids skyrocket. It's no wonder the chicken egg has developed a reputation for being an unhealthy source of cholesterol and "bad" fats and is often written off as a harmful food. In reality, the modern chicken has just been producing the best egg it can on the feed it is given.

Upon learning this, my knee-jerk reaction was to set all of my hens free to forage for their food on our property.

When lacking a varied diet (and in particular, the greens found on pasture), a chicken's egg and meat quality plummets.

GORAN BOGICEVIC/SHUTTERSTOCK.COM

But after learning more about chicken nutrition, I realized that this extreme wasn't the best route, either. Unlike their ancient Asiatic ground fowl ancestors (or the feral Key West chicken, for that matter), domesticated poultry are rarely able to meet all of their nutritional needs by foraging. Small backyards or suburban lots do not have substantial fare to support a flock for very long, if at all.

The bottom line is that variety — and balance — is best. In addition to a well-rounded commercial feed, give your gals a chance to stretch their wings and legs by grazing on grass for a few hours each day. Just because they eat commercial feed ration doesn't mean they need to stay cooped up. Any time spent foraging will be great for morale, alleviating boredom, providing exercise and supplementing their diet.

They'll be happier if they can realize their true "chicken nature," and both you and your flock will find the time fun and entertaining. And, if your birds must stay confined to a coop, run, or enclosure, give them some greens as treats — better yet, grow them yourself. Your chickens, their eggs, and ultimately your diet will be healthier for it.

THE MAIN COURSE

Like other prepackaged animal and pet food, commercial poultry feed is a relatively new commodity. Before the advent of manufactured feed and industrial trucking routes, domestic poultry likely relied on foraging close to home: "hunting" for bugs, grubs, and other small insects; eating scraps from the kitchen; and foraging for seeds, grains, and of course, grasses.

As omnivores who spend nearly every waking minute focused on finding food, this lifestyle suited chickens well for quite a while. But, over time, domestic chickens were bred toward the most efficient conversion ratios, meaning they were able to convert the least amount of food into the largest amount of protein (whether that be eggs or meat).

In the last century or so, intensive breeding has turned the domestic chicken into a veritable egg-making machine. This means that the modern layer needs much more in the way of nutrients than her ancestors in order to stay healthy and keep up with her body's egg-laying demands. In combination with healthy greens or pasture time, a good commercial feed is crucial to keeping each hen in her best health.

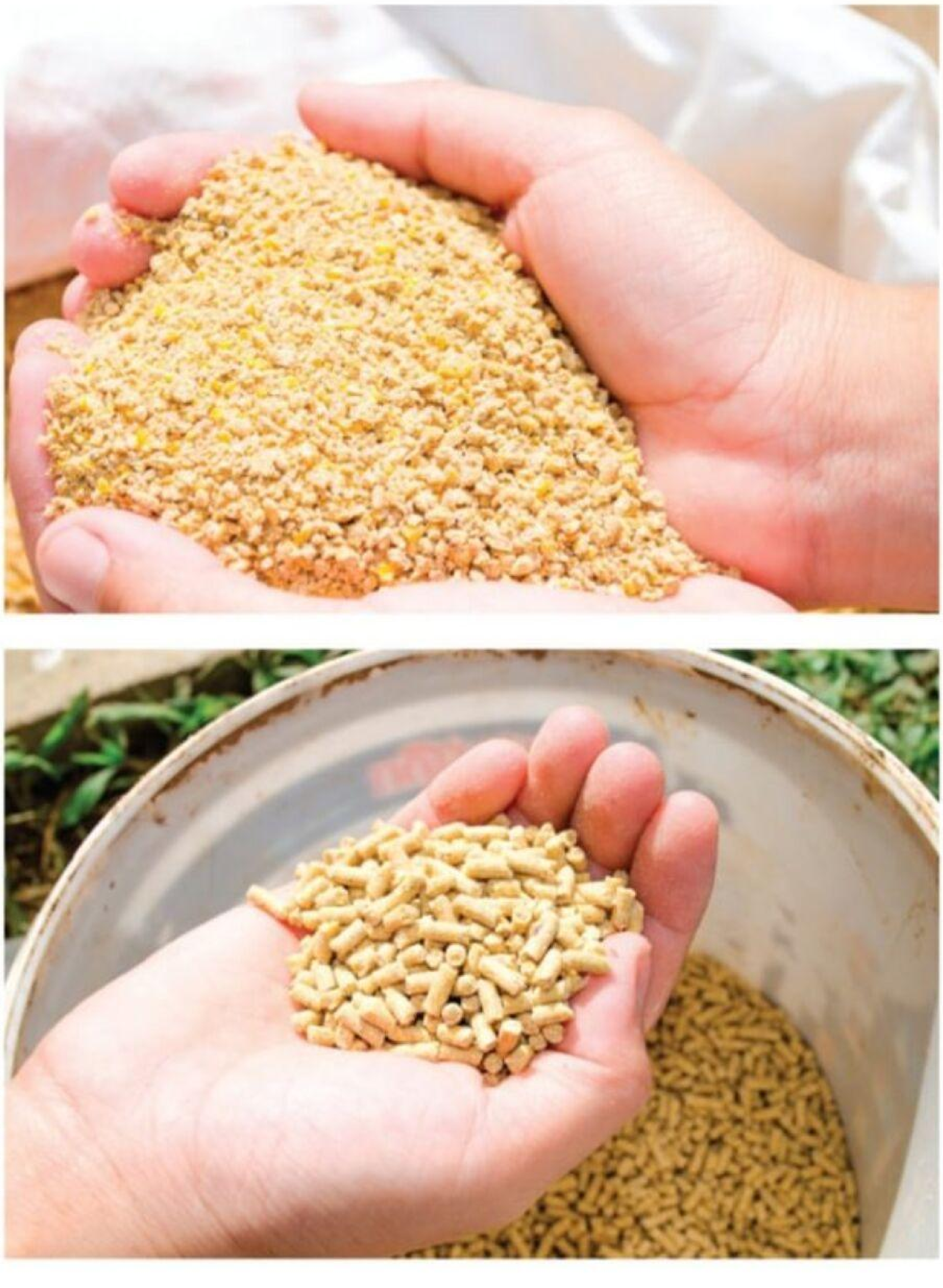
WHAT'S IN CHICKEN FEED?

Each brand of chicken feed will have a slightly different "recipe." The best way to know exactly what is in your bird's food is to take a glance at the label.

Corn and soy are two foods often found at the very top of the ingredients list on a bag of commercial chicken feed, with wheat or wheat meal often a close third. Aside from being high-allergen foods, corn and soy are nearly all genetically modified organisms (GMOs) unless purchased organic.

Furthermore, cross-contamination of fields is leading to adulterated

Crumbles (below) are often just mashed pellets (bottom).



WUTTICHAI JANTARAK/SHUTTERSTOCK.COM

BORJA ANDREU/SHUTTERSTOCK.COM

Feed should meet your hen's needs based on the season and temperature, and her breed's weight, size and rate of lay.

wheat as well. The good news is that there are more organic choices readily available today, and some brands are now making soy-free and even gluten-free chicken feeds for keepers with intolerances or for those who opt to stay away from GMOs.

Other ingredients in commercial chicken feed may include oats, field peas, flaxseed, rice bran, fish meal, oils (such as sunflower), alfalfa meal, kelp, and a variety of yeasts and added vitamins. But because brands vary widely in their ingredients, additives, and preservatives (if any), read labels closely and call the manufacturer if you have questions. Chicken feed should be consumed within about three months from time of purchase; even though it will still be edible, its nutritional value rapidly declines beyond that time.

CRUMBLES, PELLETS OR MASH?

Chicken feed is available in three types, or textures: crumbles, pellets, and mash.

CRUMBLES. With their texture, crumbles are the most popular form of commercial chicken feed. Crumbles are actually just crushed pellets. Despite its popularity, crumbled feed may lead to some wasted food because it spills rather easily from the feeder.

PELLETS. Compact capsules of feed, pellets are specially designed to contain a balanced ratio of nutrients in each morsel. In fact, this is the major advantage to feeding pellets to your birds: They receive complete nutrition in each pellet; no picking out the pieces they like and leaving the rest. A major disadvantage is that birds tend to eat pellets rather quickly, become satiated, and then bored without anything to pick and eat — and bored chickens will usually pick on each other instead. A flock with a lot of pasture time will do well on a diet of pellets.

MASH. Very simply, mash is all of the individual ingredients of a chicken feed recipe mixed together but easily recognizable to the birds. Chickens fed mash tend to pick out what they like and leave the rest. This is a major disadvantage to feeding mash. Much of the feed is wasted if the birds refuse to eat certain ingredients. Plus, ignoring some of the less desirable ingredients may lead to nutritional deficiencies.

There are ways around this, however. The easiest is to make a wet mash with the remaining feed by adding water and mixing thoroughly; the birds love it. The biggest advantage to feeding mash is that, unlike pellets that have been processed into morsels, the ingredients in mash have never been heated or processed and retain many of their nutrients.

FEED RATIONS

Whatever texture or brand of feed you choose to buy, it's most important that you purchase the appropriate feed for the age and life stage of your flock. The feed should also meet the hen's needs based on the season and temperature and her breed's weight, size and rate of lay. Generally speaking, chicks and breeder birds require a bit more protein, layers require a bit more calcium, and almost all birds eat a bit more of everything in winter and a bit less in summer.

When to graduate from chick to adult feed and how to make the transition will largely depend on the brand you choose. Read the label thoroughly and call the company to learn how and when they recommend transitioning your birds from one feed to the next.

The four types of feed are: Starter, Grower (or Developer), Broiler and Finisher, and Layer. Each is designed

Chickens love watermelon, and all parts are safe for them to eat, including the flesh, rinds, seeds and even watermelon vines and leaves!

to meet the needs of different birds in different life stages. You'll need to pick the feed that fits your intended use for your birds. Many keepers begin with Starter feed for newly hatched chicks, switch to Grower feed past the chick stage and still growing, and switch to Layer feed once their chickens reach point of lay. Broiler feed is generally for meat birds, provides high amounts of protein — around 30% — and comes in formulations for different life stages.

It's important to consider what life stage your birds are in, and feed accordingly. Not all nutritional profiles are acceptable for birds at all ages, and you can harm their health if you offer an incorrect diet.

A SIDE OF GRIT & SHELLS

There are two main supplements that every chicken keeper should become intimately familiar with: grit and oyster shells. Both supplements look like tiny rocks or very small gravel and are easy to source since they are very common supplements for backyard chicken keepers.

Every egg-laying flock will need both of these supplements. Some chicken keepers will argue that layer feed completely covers the digestive and reproductive needs of laying hens (it can). Similarly, others will insist that free-ranging chickens are able to pick up all the "grit" they need from the ground (sometimes they do).

But pet chickens are often fed scraps and treats that require additional digestive effort, and pastured birds will eventually run out of natural grit wherever they roam. However you choose to feed your chickens, they will need access to the grit and oyster shells that you provide.

HOW TO SUPPLEMENT

If there were a cornerstone in the digestive system of a chicken, it would be grit. Without teeth to chew their food, chickens rely on these little rocks to team up with the strong muscles of the gizzard to mash and grind everything they eat into manageable, digestible bits. A bird deprived of grit may experience a variety of digestive issues, such as impacted crop, sour crop, other digestive blockages, and their repercussions, ranging in severity from severe discomfort to death.

Begin offering grit to chicks as young as one to two weeks old if they are eating any food other than their designated starter feed, such as treats, or if they spend any time outside on pasture. Choose chick-sized grit for

Without teeth to chew their food, chickens rely on grit to team up with the strong muscles of the gizzard to mash and grind what they eat into digestible bits.

SHERJACA/SHUTTERSTOCK.COM

SANDRANDLIDIA/SHUTTERSTOCK.COM

Every chicken keeper should become familiar with grit and oyster shells. Both supplements look like tiny rocks or very small gravel.

young birds. If this product isn't available at your farm and garden store, check pet stores for parakeet grit or grit for other small pet birds. Once your young flock reaches its adult size, switch to the standard-sized chicken grit.

Many of the egg-laying breeds of chickens we hold dear have been developed and refined over time to produce the maximum number of eggs possible. The production of eggs, however, requires a substantial amount of calcium — about 2 grams per egg, in fact.

What happens when a hen doesn't have all the calcium she needs? She could experience reproductive issues, such as prolapse, and exhibit cannibalistic behaviors, such as egg eating. Her eggs' shells will lose strength over time and may become deformed or even shell-less.

Eventually, a hen with a true calcium deficiency will develop weakened and brittle bones as her reproductive system pulls the calcium it needs from her body. Fortunately, the remedy is so simple. Providing a laying flock with oyster shells every day of the year is a quick, easy, and inexpensive preventive measure for a host of reproductive problems — and keeps you flush with eggs, too.

Pullets don't need extra calcium until they are actively laying. In fact,

KEMEO/SHUTTERSTOCK.COM

BASIC HERBS

GARLIC boasts powerful anti-microbial and anti-parasitic properties. Though not an herb, garlic benefits can't be overlooked. In fact, if there was only one natural remedy used for poultry, garlic should be it. Garlic boosts your birds' immunities, fighting ailments from the inside out.

CATNIP (CATMINT), FEVERFEW, LAVENDER & LEMON BALM. When dried and sprinkled in the nest box, these four hardworking herbs will use their anti-parasitic properties to keep pests away.

CALENDULA, CHICKWEED & CLOVER. All three of these plants make excellent, nutrient-dense foods for chickens. These "weeds" are a favorite chicken food and can be pulled straight from your lawn or garden (as long as they haven't been sprayed with chemicals) and given to your birds as they are.

chickweed

oregano

BASIL, MINT(S), OREGANO, ROSEMARY, SAGE & THYME. These highly aromatic and flavorful herbs have spent generations in our kitchens helping to preserve food and adding an impressive array of nutrients to common fare, as well as boosting taste. Their strong aromas either confuse or irritate the insect's highly sensitive olfactory sensors, ultimately keeping them away.

an overabundance of calcium could be harmful to young chicks, so hold off on offering oyster shells to immature birds. A good rule of thumb is to begin offering this supplement to a flock upon maturity — at point of lay — or once the first few eggs start showing up.

HERBS, FLOWERS & SUPERFOODS

There are many herbs, plants and foods that naturally boast immense healing and health-promoting properties. There are herbs and plants that effectively repel nasty bugs — whether fresh in the garden or dried — make excellent tonics and tinctures, have anti-microbial, anti-viral, and anti-parasitic properties, and some that are nutrient-dense foods eaten just as they are.

Most of the following herbs and plants are really easy to grow in any size garden or pot, and the so-called superfoods are easy to find at grocery stores and farmers' markets.

TREAT YOUR BIRDS

A flock that is regularly offered treats will quickly learn to trust and follow their keepers. This comes in handy when training, breeding, preparing a bird for show, or administering medical care. Plus, giving treats is just fun — it gives you a chance to watch your birds, study their behavior, and get to know their individual personalities while they chirp, peep, and squabble over snacks.

SCRATCHING THE SURFACE: Scratch is the quintessential chicken treat. Each manufacturer of scratch will have a slightly different recipe, but the main ingredients are usually whole grains, such as cracked corn, wheat, and barley, with secondary ingredients such as sunflower seeds, dried mealworms, flaxseeds, and even dried fruit like cranberries and raisins. As you can imagine, scratch is like candy for chickens, and, in fact, a wise chicken keeper knows to consider it as such.

KITCHEN TREATS: Just about any unprocessed food scrap from the kitchen can be given to your chickens. This includes scraps or cuttings from nearly every fruit or vegetable, with a few exceptions. (See "What Not to Feed Your Chickens" on the next page for those exceptions.)

My flock adores fruit such as overripe bananas, peaches, apples, raisins and every berry variety I've ever offered to them. Applesauce is always a huge hit. Most chickens also love leafy greens, summer squash, winter squash, tomatoes, and other soft vegetables, too.

ALTERNATIVE OFFERINGS: Chickens also adore meat, and it's a great source of extra protein for certain times of the year, such as when the flock is molting. Just make sure bones are large enough to prevent swallowing and

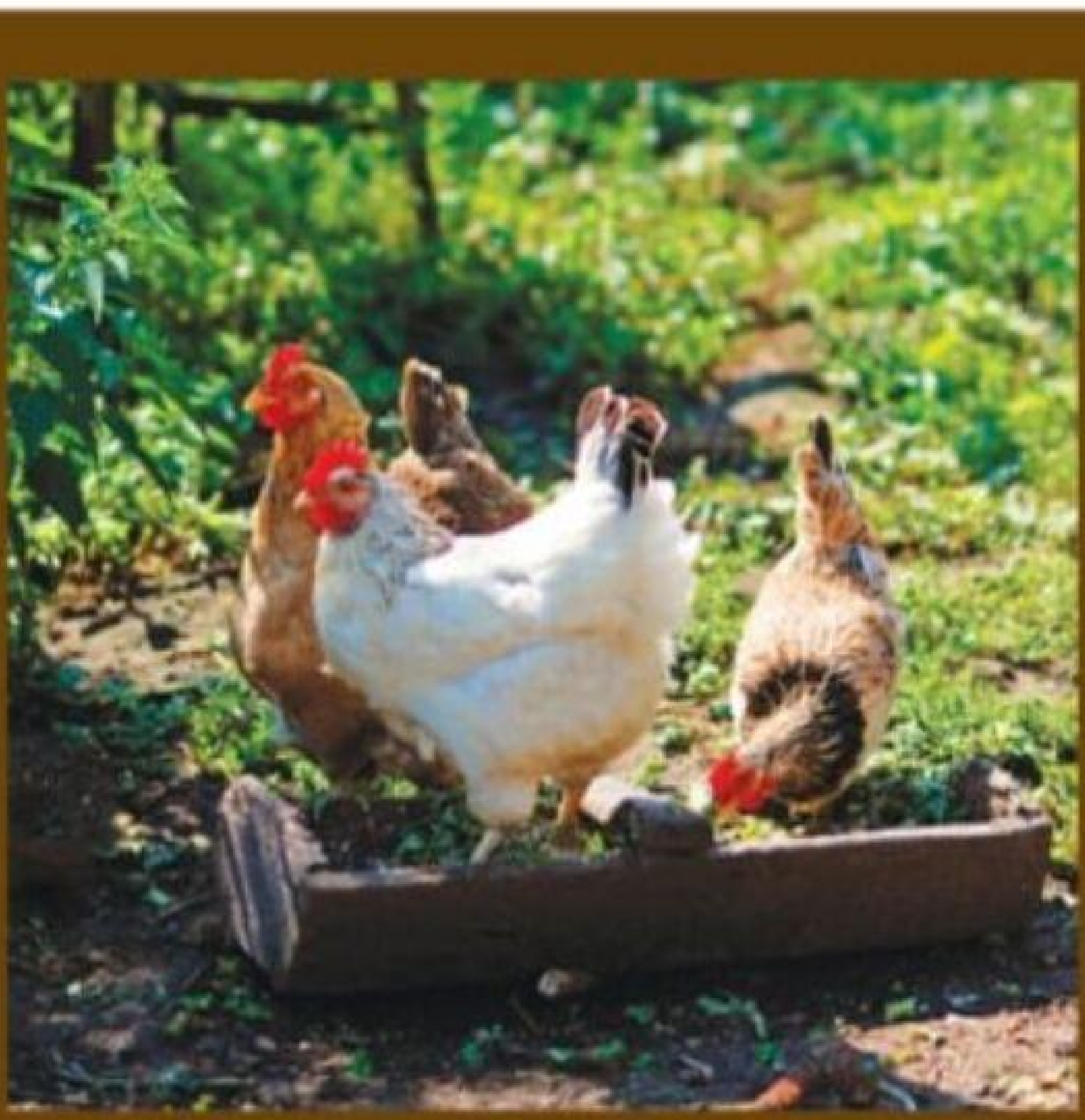
YOU ARE WHAT YOUR CHICKENS EAT

Have you ever heard the phrase "You are what you eat"? Well, when it comes to raising chickens for eggs, it's no different. For instance, many people with gluten or soy intolerances show sensitivities to factory-farmed eggs but are able to eat eggs from pastured hens. This is because the factory-farmed hens may be fed products that contain these and other potential allergens.

Pastured hens, on the other hand, live on a diet that largely consists of natural grasses, seeds, and bugs and will be supplemented with feed (hopefully organic). If you or a family member experience any sensitivities to certain foods, especially top allergens like soy, consider purchasing chicken feed that does not contain these ingredients.

You may also want to consider purchasing organic chicken feed. Organic feed may come with a slightly higher price tag, but it also comes with better overall results and health benefits.

The only way to be sure that you aren't buying or eating genetically modified organisms (GMOs) is if you purchase certified organic products. If you do purchase feed that contains corn, cornmeal, soy, or soybean meal, consider buying organic to reduce your chickens' intake of GMOs. After all, you're raising chickens to feed yourself and your family the best food possible — and it starts with what your chickens eat.



If you have any sensitivities to certain foods, especially allergens such as soy, purchase chicken feed that does not contain these ingredients.

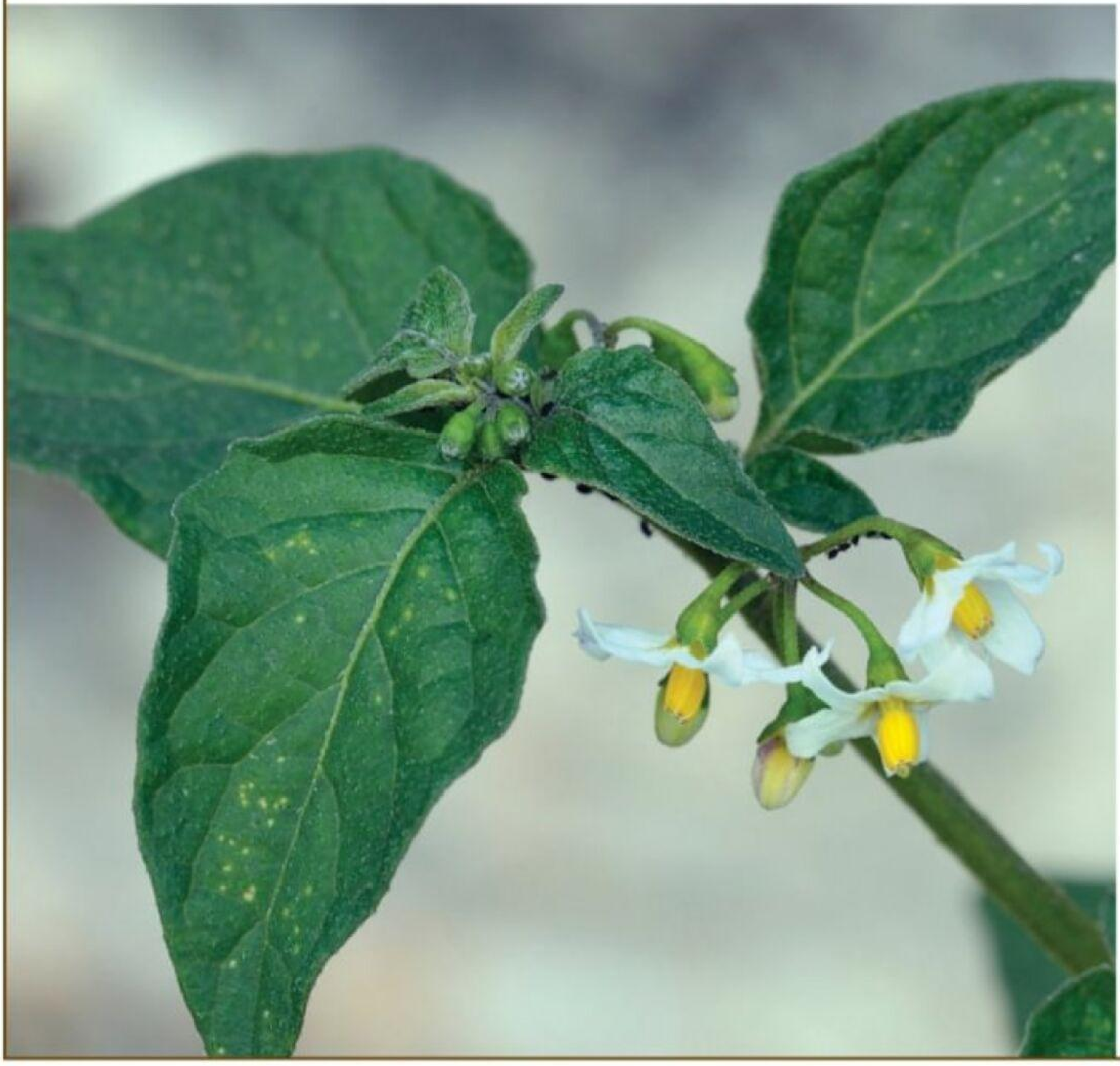
remove them from the coop after a day or so. Dairy products are also fine in moderation. In fact, yogurt is a great source of probiotics; when mixed with the crumbs and powder at the bottom of the feed bag, it makes a great treat while keeping waste to a minimum. Pasta, stale bread, and rice are tried-and-true favorites, too, as long as they are well cooked and offered in moderation. Cooked eggs and crushed eggshells are also well loved by chickens. As long as the eggs are cooked and the shells are crushed, this treat won't encourage egg-eating behavior.

Whatever the food item, just be sure that the pieces are a manageable size for a chicken to gobble up. Leafy greens, in particular, should be chopped or torn into smaller pieces. Chickens tend to get greedy and excited when they see the scrap bucket — a potentially lethal combination if an individual swallows large, whole chunks of food in a hurry.

Kristina Mercedes Urquhart writes for Chickens *magazine and is the author of the book* The Suburban Chicken*. She lives on a homestead in North Carolina, where she grows her own food and raises livestock.*

WHAT NOT TO FEED YOUR CHICKENS

There are many plants that could pose a potential risk to your birds if ingested, but that doesn't necessarily mean they will. Some chickens will instinctively keep a distance from toxic plants, and some will not. Plus, not every toxic plant is equally toxic. This isn't a comprehensive list by any measure. If you're unsure of a plant's toxicity, ask the horticulture experts at your local nursery or consult your avian veterinarian.



- Avocado *(the pit contains a toxic fatty acid called persin which is fatal to all birds)*
- Black locust
- Black nightshade
- Castor bean
- Corn cockle
- Jimsonweed
- Milkweed
- Monkshood, wolfbane
- Morning glory seeds
- Nightshade plant leaves *(eggplants, peppers, potatoes and tomatoes)*
- Oleander
- Poison hemlock
- Potatoes, green or sprouted
- Rattlebox
- Rhubarb leaves *(the oxalic acid contained in them is also poisonous to humans)*
- Soybeans, raw *(enzymes in the bean's raw form can cause digestive upset)*
- Tobacco
- Yew

Black nightshade (pictured) can be toxic if ingested by a chicken.

LET'S GET PHYSICAL!

Keep winter doldrums at bay
with these boredom-busting activities.

BY MARISSA KING

Bring the outdoors into the pen, with compost piles, stumps and tree limbs.

"Idle hands are the devil's plaything" is a saying that most people think only applies to humans. On the contrary, it can apply to all species of animals, especially poultry. There are many behaviors that may appear if you have bored birds, and some aren't the greatest to see.

If your flock is bored, it's not going to be living the best life. Particularly in winter, you might see these behaviors more often. Keeping your flock cooped up can increase the chances of these behaviors establishing. Always on the move, chickens are extremely curious little creatures. With warmer weather, many flock owners free-range, and with the multitude of activities that they participate in throughout the day, chickens can get bored very easily.

Many things happen throughout a bird's day. Pecking, scratching, chasing after bugs, flying up in trees, playing in weeds, socializing, dustbathing, sunbathing and investigating anything foreign are just a few daily experiences. In a large environment, chickens have many activities to behave in and can keep themselves entertained all day long with no issues. Once you coop your birds, you can take a lot of these behaviors away without meaning to.

Always, always, always ensure that you have more than enough space for your flock. You can never go wrong with a large run. This will ensure that even if you have bully birds, your bottom bird will have enough to get away.

BIRD BEHAVIOR

We're going to dive into these behaviors one at a time before we get into boredom busters. Feather picking and feather loss are going to be a leading sign. Over time, you'll learn your flock member's individual traits.

Most flocks have a "bottom bird" that is the bird at the very bottom of the pecking order. This bird will get picked on, and you'll see this sign first thing on it. When chickens are bored (sometimes feather picking could indicate another issue), you'll start to notice broken and/or missing feathers. What is happening is that another bird is bored, and they're picking at the other bird and not at the ground or something else.

If this goes on too long, you risk birds in your flock getting injuries and illness. If a bird is picked on too much, their skin will start to suffer and you'll have an increased risk of them being cold or getting an infection.

Bored birds can also start eating their eggs. They might do this with a vitamin deficiency, as well, but if they're cooped up and bored, this behavior will rear its ugly head. During winter, some breeds lay, while others don't. You'll have to rely on how well you know your flock to see when this behavior will make an appearance. If you normally get one to two eggs daily during winter and then you begin to get zeros across the board, suspect that your flock may just be tired of having nothing to do.

Another issue that you can run into is destruction. If your flock is bored enough, they'll start messing with things that they normally don't touch. If you have netting within their reach, they may start flying into it or pecking at it. Destruction doesn't only apply to their coop but to each other. Remember: They're genetically related to dinosaurs! They'll stir up arguments amongst themselves just to give themselves something to do. This again can lead to injuries and illness. If you have roosters mixed in, they may repeatedly challenge each other or overbreed your hens if they get bored.

Boredom busters are here to help curb the behaviors we really looked into. You want boredom busters that are easy and provide entertainment for long spans of time when you can't be in the coop with them. You want to bring a complex environment in as much as you can and provide them with some type of stimulation.

GARDEN TREAT

This one is easy enough! If you grow a garden or visit a grocery store, pick up a watermelon, pumpkin or any large fruit or vegetable. This buster can be healthy, as well as add preventative superfoods to your birds' diet.

Take a watermelon or pumpkin, and cut it in half. I like to put oregano on top of the cut part because oregano boosts birds' immune systems. However, you can use any topping you know your flock enjoys — blueberries, strawberries, blackberries, herbs, mealworms, etc. Set it in your coop, and you're done! This will keep your bird's attention for most if not all day.

During summer, if I have to put my flock inside the coop for predator reasons, I use watermelon, cucumber, squash, zucchini and balls of lettuce or cabbage. During fall and winter, I'll use pumpkin, broccoli, cauliflower and different types of squash available then.

JUST A SWINGING

Give them a chicken swing! You can buy a swing from many retailers, but they're so easy to make! I start with finding a 2- to 3-inch-thick branch or piece of wood. I've also used tobacco sticks when I've had them available. I get one that's at least 3 feet in length, so birds aren't knocking each other off to have a turn and everyone gets a turn. Plus, they have the extra stimulation of keeping their balance when another bird tries to jump on.

Next, you'll need to find some baling twine or rope. Tie a piece of rope on each end, and tie the other ends on a rafter that you have somewhere in the coop. If you don't have a rafter or sturdy point to tie the other ends of rope, you may need to make a stand. You can do this easily

HEN HACK

If you grow a garden and have extra leftovers, freeze some as a cool treat during summer and to dethaw and give during winter! Don't forget berries and leafy greens!

An old ladder is like a jungle gym for cooped-up chooks!

with two 4x4s set into the ground and cut to the desired height. Lay another 4x4 across the top of those two, and screw or nail together. You can easily attach your rope ends to that.

TIME FOR TOYS

Give them toys! Chickens have been found to be very intelligent and emotional animals. Chickens can function on the mental level the same as about a human toddler. If you are a parent, don't throw those toys away just yet! Some toddler toys can keep your flock entertained for hours!

Throw in a mirror or two for added fun. Some favorites that I have seen are toy xylophones, toddler pianos, stacking toys and rattles. Always remember to keep the coop clear of toys that have parts that could potentially be pecked off. You don't want your flock ingesting decorative pieces.

HANG, MAN!

You can do this buster many different ways. You can buy large, round produce and run a rope through it, or you can grab a hay bag at your nearest feed-supply store and load it up! I originally carved a hole through the middle of a pumpkin, head of cabbage or lettuce, or a small watermelon before hanging them.

I accidentally discovered the hay-bag method when I discovered my free-rangers were in the goat pen and found the hay bag as a source of entertainment. They were jumping up to pick hay out of the bag, and the idea struck to start one in my breeding pens.

I find the hay bag much easier than the rope method, and you can add a variety of treats to it. Get a small netted hay bag and not the solid kind. When I use hay bags, I put apples, leafy greens, bananas, chard, carrots and things that I could find that wouldn't fall out of the netting.

JUMP AROUND

Give them something to jump on! This buster can be free if you have logs around your property. It also doubles as a treat!

Place a few stumps and logs in the coop. The different heights will keep them busy, and they'll get treats if any bugs run out from under the bark on the logs. If you have an old wooden ladder, this can give your flock an activity also.

Socialize with your flock; members will interact with you and enjoy your voice.

When I first began seriously breeding and had to pen my flocks up, I would rotate saw horses in and out of their pens when I noticed they needed more stimulation. A pallet can also work to hold their attention.

REDUCE, REUSE, RECYCLE

If you have old water bottles laying around, don't throw them away! Repurpose them!

Punch or burn holes around the outside, and throw some mealworms or grubblies in it! Make more than one, and place them in the coop! Your flock will stay productive and busy pecking and rolling the bottle around to get out the treats.

PILE IT ON

A big pile of just about anything can hold their attention for a bit. Hay, herbs or even leafs give your flock joy by giving them something new to peck and scratch through. With chickens being as curious as they are, a new texture of just about anything that they can spread around can keep them entertained for hours. Every year I would trim back my lavender and have a big bundle to let them peck and scratch at. Helped with the coop smell as well.

BUILD A BATH

To ensure happy and healthy birds, make sure there is a dust bath somewhere in their run or in their pen area. This helps keep a flock busy for some time and keep parasites off of your birds.

Fine sand and dry dirt are the building blocks of a good dust bath. You can go the extra mile and throw in some herbs to keep your birds smelling fresh. Many chicken-keepers make dust baths in different ways. Some will let their birds make their own holes, others will put their ingredients in a tire set on the ground, and many will use a kiddie pool.

SOIL THEIR PEN

My friend's family has an in-run compost pile! Any compost they have, they put in an area surrounded by chicken wire with one side opened up.

My friend's flock gets entertainment for hours, and she gets really enriched soil to plant her tomatoes in! She never has to turn it either because the chickens do it for her and even fertilize it as they're scratching away.

BE YOURSELF

Just spending time with your flock offers them companionship and a change of pace. It's beneficial as a boredom buster, and it can also be a positive impact on you as the flock owner.

Chickens are social creatures by nature so they can establish relationships with their caretaker. This also helps you with mental and physical well-being! Chickens can recognize up to 100 faces so they can remember who is who.

While boredom busters keep birds busy, they also help with the overall health and happiness of you and your flock, alleviate negative behaviors and keep a flock busy for a long time to come.

Marissa King is the owner of King's Cocks and the Mother Cluckers. She operates a small farm out of Sweetwater, Tennessee, with her two daughters where she works with poultry, goats and honeybees.

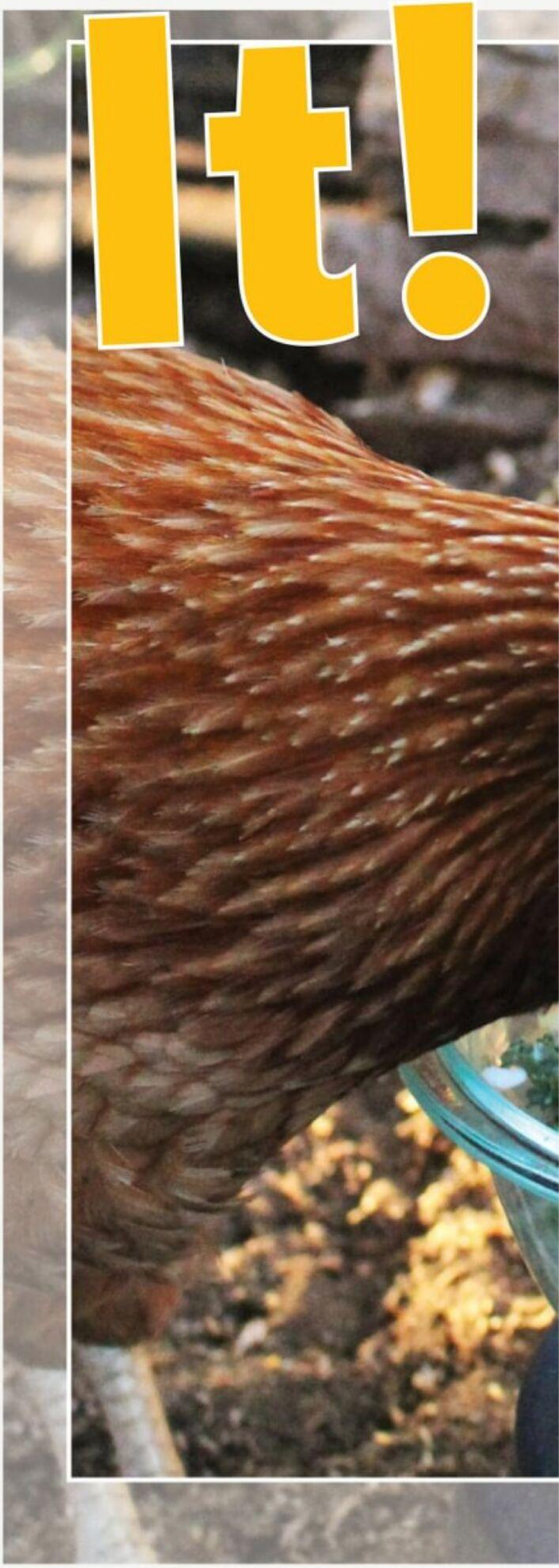
Placing perches and "swings" (far right) in the run provides a playground of entertainment.

MARISSA KING

COME & Get It!

Make these five treats for your backyard flock to keep them happy and healthy.

ARTICLE & IMAGES BY STEPHANIE THUROW



My family and I wanted chickens for years, but it never seemed like the right time. Once the spring of 2020 rolled around and all travel plans were canceled, we decided to get our own flock established. We were all home more than ever before and finally had the time to invest in such a project.

We live just outside of Minneapolis, Minnesota, and our home is in a residential area, which limits the number of chickens we can have. We are only allowed three chickens per the city ordinance, and no roosters (unless your neighbors don't complain, which they did). So, we have three hens; an Easter Egger, a Gold Star (a hybrid between a Light Sussex and Rhode Island Red) and a California White.

All breeds were decided upon by what their adult weight would be because space is limited and by their cold hardiness because we often get negative winter temperatures. Between the three hens, we get nearly 800 eggs per year, which is more than enough for our small family. With 800 eggs, we always have enough extra to share with family, neighbors and friends.

Before owning our small flock, I had no idea that chickens had such personalities; even from the first day they hatched, they had distinct personality traits. Phyllis was the sweet, most lovable chick; Smarty Pants was much smarter than the others (she was born one day earlier, and it showed); and Little B. was — well, you get the point. They've become a part of our family.

I enjoy their "help" in the gardens and their silly chicken antics. Smarty Pants loves to sneak into my landscaped mulched

areas when I'm not looking and scratch around, even though she knows it's off limits to her. Little B. loves to hop up the ladder of my daughter's swing set and take in the view from the highest points, and Phyllis loves to walk into my gardens and take a quick bite here and there of my kale, chard, broccoli and cauliflower. Phyllis thinks she's being sneaky, but the truth is that I don't mind one bit and am happy to share.

I especially enjoy early mornings in the summer with them, before the sun rises and heats up everything. I let them out of their poultry pen, and they tour the gardens with me, while I enjoy a mug of coffee; those mornings are my favorite.

Grain must be covered with water in order for the wild yeast to be captured and start growing to produce fermented feed.

Five of my favorite treats follow that we occasionally make for our adult laying hens. Please note that treats are to be given in moderation, and hens shouldn't have more than a couple tablespoons of treats per day.

TREAT 1: LEFTOVERS

Whenever we cook up a batch of organic rice, I always reserve a little for the hens. Then I mix in whatever chicken-friendly scraps I have and add whichever produce I need to use up, such as grated zucchini, chopped kale, chard or other leafy greens.

I continue adding in whatever I have on hand — unsalted nuts or seeds, chopped apples, mashed bananas or other fruit and then I mix in some herbs. My hens especially enjoy oregano. I stir it all together and top it off with some dried mealworms or dried fly larvae and some oyster shells. There is no measuring required for this recipe, just a little of this and little of that, and it's adored by all. Plus, it's a great way to get rid of some kitchen scraps.

TREAT 2: FRUIT & VEGGIE GARLAND

Celebrate the holidays with your hens or celebrate "just because." Start with good strong string or wire. Then find a tool to push through the fruit and vegetables. I made a large needle out of wire, but a screwdriver or large sewing needle would work as well.

Tie a knot in the string with at least a 6-inch tail and begin threading a variety of chicken-safe fruits and vegetables onto the garland. Cut larger produce into 2- to 3-inch chunks.

Keep the garland 18 inches or shorter so that it doesn't get too heavy, then tie another knot, leaving at least a 6-inch tail. Attach the garland to the chicken wire/fencing, and watch the hens enjoy their special treat.

Be sure to keep an eye on the hens while they eat, and remove the string/wire once they are finished snacking. String is unsafe for chickens to consume and can cause major digestion issues.

Garland ingredient suggestions include brussels sprouts, grapes, apples, zucchini, cucumber, lettuce, squash, strawberries or watermelon.

TREAT 3: SUET TREAT

For this homemade treat, use the following recipe.

INGREDIENTS

- 1 cup coconut oil
- ½ cup unsalted nuts, chopped (pine nuts, pecans, pistachio or peanuts)
- ½ cup unsalted seeds (sunflower, pumpkin, chia or sesame)
- ½ cup mixed, dried, unsweetened fruit (dried cranberries, apples, blueberries, apricots, raisins or bananas)
- ½ cup mix dehydrated vegetables and herbs (carrots, zucchini, oregano, basil or dried nontoxic flowers, such as marigold or calendula)
- 1 cup scratch mix

PREPARATION

In a medium-size bowl, mix dry ingredients together. Melt coconut oil in a small saucepan on low until liquid. Use a heat-safe glass or metal baking pan as the suet block mold (large enough to fit 3 cups of mix), and line with parchment paper.

I personally prefer to use silicone soap molds for my suet blocks (never used for soap-making, only suet), because the set suet bricks easily pop out without any trouble of lining them with parchment paper.

Fill the prepared mold with the dry ingredients, and slowly pour the liquid coconut oil over the mixture. Allow this to cool for many hours or move to the refrigerator to speed up the process. The coconut oil will harden and turn white once completely cooled.

To serve, simply give the suet brick to the hens or hang it in a suet feeder. It's best to avoid serving on very warm days, as the coconut oil will soften and melt.

TREAT 4: FERMENTED FOOD

The first time I made fermented chicken food was when Phyllis cracked her beak. She couldn't peck the way she normally did because it would induce bleeding. I decided to add water to her food and let it soak up overnight.

I quickly noticed the hens were extremely enjoying this softened food. Little did I know that I was not only making the food easier for my hens to eat but also making it more beneficial for them.

I learned in Anne Kuo's book, *The Beginner's Guide to Raising Chickens*, that by fermenting chicken feed, it allows the naturally occurring bacteria to unlock the grains — making their enzymes, proteins and nutrients more readily available for the body to absorb — just like in fermented foods that humans eat.

Author Kuo, an avid backyard chicken-keeper, goes on to say that studies show that fermented chicken feed has many benefits, including better intestinal health, stronger immune systems, shinier feathers, increased egg size, less smelly droppings and stronger disease resistance, including resistance to salmonella and E. coli.

Suet is the perfect winter treat,as it has the necessary fat for the flock to retain protein and other nutrients over the cold winter months.

For a high protein molting snack, include scrambled eggs, garlic, oats, black oil sunflower seeds, hard red winter wheat berries, brewer's yeast, dried grub worms and sesame seeds.

I don't ferment each meal for my chickens. However, I ferment 1 quart on a weekly basis and they very much appreciate it.

HOW TO FERMENT CHICKEN FEED FOR A SMALL FLOCK

Measure 2 cups of chicken feed into a clean quart mason canning jar. Add water until the feed is covered with at least 2 inches of water and stir well, add more water as needed throughout day 1 so that the feed stays submerged.

Cover with canning jar lid and ring and tighten. Ferment at room temperature, ideally between 60 to 75 degrees Fahrenheit, and keep out of direct sunlight. Ferment between 1 and 5 days.

BURP THE JAR DAILY: Unscrew the lid briefly to allow built up gas to release (and avoid possible jar breakage), then screw it back on tightly. It's completely normal to see little bubbles or even foamlike bubbling occur at the top of the ferment.

Use a clean spoon to stir down the feed, as it will push up toward the mouth of the jar as it ferments.

The fermented feed may have a sour smell, which is another normal sign of fermentation. To serve, pour the fermented feed into a clean dish for your flock as-is, or stir in any chopped fruit, veggies, leafy greens, oyster shells or treats as you see fit. Discard if mold is present.

TREAT 5: HIGH-PROTEIN MOLTING MIX

It's obvious when my flock is approaching molting season because they begin instinctively trying to boost their protein intake. They search for bugs and worms in my landscaped gardens and spaces where they normally stay out of during the summer; they know many bugs hide within the mulch.

At this point, I help them by lifting pots and stones around the yard, so they can peck and scratch the soft soil full of insects that hide below. I also help them by making high protein snacks, such as this recipe.

This is another recipe that I generally don't measure, I just add a little of this and a little of that. But here is the general outline that I follow.

Feed a high protein snack when your chickens are molting to aid them in replenishing lost feathers.

INGREDIENTS: Scrambled eggs, garlic, oats, black oil sunflower seeds, hard red winter wheat berries (or other mixture of wheat), brewer's yeast, dried grub worms (or dried black solider fly larvae) and sesame seeds.

- Cook one egg per every two hens, and scramble with coconut oil and one garlic clove, chopped.
- Stir eggs into ¼ cup cooked oatmeal
- Mix in ¼ cup high-protein wheat and seeds
- Top with brewer's yeast and grub worms

Because we live in a residential area without too much space to roam, we like to jazz things up with different snacks and treats for the hens. I especially like to incorporate treats in the winter, when our ground is covered in snow and frozen solid. The chickens need more food during these months because they're using energy to stay warm.

Stephanie Thurow is the author of Can It & Ferment It, WECK Small-Batch Preserving *and* WECK Home Preserving. *Stephanie is a certified master food preserver and food preservation instructor from Minnesota. She has special interest in vegetable fermentation and water bath canning and is known for creating easy to follow recipes. Connect with her at www.instagram.com/minnesotafromscratch.*

GROW SOME HERBS

Chickens love herbs, and they make a great snack for a small flock.

MINT: Helps repel rodents and insects, safe for chickens to eat and is said to be calming for chickens.

OREGANO: Known to be a natural antibiotic and immune booster, additionally it's a guard against a whole host of common chicken illnesses.

BASIL: Promotes a healthy respiratory system and a healthy immune system overall.

LAVENDER: Said to be a natural stress reliever and also an insect repellent. Can be chopped into food fresh or used dried.

THE IMPORTANCE OF *Probiotics*

PANUPONG/STOCK.ADOBE.COM

Add these essential nutrients to your flock's diet to boost health, production and longevity.

BY ERIN SNYDER

Probiotics are an essential part of our diets. With their ability to help ward off harmful bacteria and viruses and keep our guts healthy and robust, it's no wonder we want to include probiotics in our everyday diet. But did you know probiotics are equally crucial to our flock's immune system and digestive tract? Not only does feeding our chickens probiotics improve their well-being, but it'll also improve the flock owner's health.

WHAT ARE THEY?

The word probiotic means "for life." So, it's only fitting that every living creature needs probiotics to thrive. Probiotics are beneficial bacteria and yeast known as live organisms in your chicken's body. These organisms line the chicken's digestive tract and intestines with a protective coating to help prevent infections and disease. Probiotics also help to raise a chicken's antibodies to further protect against illness and harmful bacteria or yeast. (More on that later.)

While all chickens naturally have some probiotics in their bodies, just like humans, supplementing their daily diet will increase these beneficial microbes, resulting in a healthier, more robust flock.

PROBIOTIC PROS

So many benefits come from supplementing your chickens' diet with probiotics that it's difficult to know where to begin. While we know that probiotics help control salmonella, E. coli and other bacterial infection outbreaks in backyard flocks and commercial chicken farms, you might wonder what else probiotics do. Before diving into different ways probiotics benefit our chickens, let's look at how probiotics can help combat and avoid salmonella and E. coli outbreaks.

Salmonella and E. coli are members of the bacteria family. Both can be very harmful and cause sickness and, in extreme cases, death. Probiotics work to coat a chicken's intestinal tract to protect against these and other harmful bacteria and yeast attacking the intestinal walls. Probiotics stimulate the microfloral and pathogen growth in a hen's intestines, combating harmful bacteria with good bacteria in the intestinal tract. Research has proven that probiotics can not only lessen a chicken's chance of contracting salmonella, but they can also heal the gut of a chicken that has a salmonella infection.

While E. coli exists in all poultry manure, it only becomes a problem when a chicken's (or flock's) digestive system becomes susceptible to the E. coli. These bacteria can happen because an individual hen is sick, but the infection usually starts because a chicken has an unhealthy gut. The infected hen will poop manure infected with E.-coli, spreading the bacteria to the rest of the flock. E. coli infections are a severe condition that will spread through the flock and could also harm you and your family if you consume the eggs or meat from infected birds.

Probiotics are the best way to combat an E coli outbreak. In contrast, antibiotics can increase the E.-coli bacteria leading to death. Probiotics eliminate the effects of an E. coli infection by safely removing harmful bacteria from an infected hen's intestines. Since the

FEEDING PROBIOTICS TO CHICKS

Chicks need probiotics to grow up healthy and strong. Whether shipped across the country or hatched by a broody hen or in an incubator, chicks need probiotics more than our adult chickens. Like a human baby, chicks' immune systems have not fully developed, making them more susceptible to disease.

Chicks fed probiotics from an early age are less likely to contract pasty butt, coccidiosis, E.coli and salmonella and are less likely to succumb to disease later in life.

Studies have proven chickens fed probiotics have more than double the antibodies in their blood and intestines than chickens raised without probiotics. These antibodies help to prevent bacterial and viral infections, cancer and heart disease.

To read more about the research on chicks raised on probiotics, read "Probiotics Help Produce Safer, Healthier Chickens, Researchers Discover" by Dr. Shayan Sharif, a professor at the University of Guelph in Ontario, Canada, whose research is focused on the chicken immune system: bit.ly/44EeDxm

Probiotics can be a beneficial addition to a chicken's diet, helping to promote their health and productivity.

ANTIBYDNI/STOCK.ADOBE.COM

SQUIRREL7707/STOCK.ADOBE.COM

As used as part of a healthy diet, probiotics can help your entire flock build a strong foundation for healthy digestive development.

antibiotics’ job is to kill all bacteria (good or bad), it makes sense that probiotics would be a more effective treatment for an E.-coli outbreak.

So, how else do probiotics benefit our flocks? Probiotics provide backyard flocks the chance to live healthy, productive lives. Chickens raised on probiotics are more energetic and lay bigger eggs with thicker eggshells. These traits are due to probiotics enhancing the gut’s ability to break down carbohydrates, releasing the necessary energy our chickens need to thrive.

Did you know that 60% of a chicken’s immune system is in their digestive tract? This explains why chicks and chickens raised on probiotics have a stronger immune system capable of fighting infections and diseases, including cancer.

Researchers at PoultryDVM.com have found that probiotics may prevent and, in some instances, help to treat toxins, infections, bacteria and conditions. These include avian intestinal spirochetosis, avian tuberculosis, chronic respiratory disease, coccidiosis, E.-coli, fowl cholera, heatstroke, salmonella, sour crop, yolk sac infection and more.

Probiotics can also have positive side effects on molting chickens and hens recovering from antibiotic treatment and prevent respiratory diseases. However, never use probiotics to treat a sick or injured chicken unless directed otherwise by a licensed veterinarian.

ADD TO YOUR FLOCK’S DIET

Just as you take supplements daily to keep yourself healthy, your flock needs probiotics daily to thrive. Adding probiotics to your chickens’ daily diet is very easy. There are two ways to incorporate them into your flock’s diet, as probiotics can get mixed into either feed or water.

FEED PROBIOTICS

pros: Feed probiotics are convenient because you only have to mix in probiotics when opening a food bag. It’s just once and done without the hassle of a precise probiotics-to-feed ratio.

IN FEED

Even if your chickens consume food already enhanced with prebiotics and probiotics, adding additional supplements is still recommended. When following the directions on the probiotic container, don’t worry about exceeding the required amount of probiotics. So, it’s OK to feed added probiotics and prebiotics, and it’s also encouraged.

FERNANDO/STOCK.ADOBE.COM

cons: The downside to probiotics mixed into feed is your lack of control over your chickens' consumption. The probiotic powder often sifts down to the bottom of the bag, leaving your flock with little to no probiotics at the top and potentially consuming too many nutrients when the bag starts running low.

WATER PROBIOTIC

pros: Water-soluble probiotics are my favorite. Just add the probiotics to a gallon of water, and that's it. And if all flock members drink, everyone gets equal nutrition daily.

cons: Many flock owners consider water-soluble probiotics a con due to the need to refill waterers twice daily. However, chickens prefer fresh drinking water, so changing water twice daily with or without probiotics is advised.

Whether you choose to mix probiotics into feed or water is a personal choice. Store all probiotics in a dry area in an

Through probiotics, chicks receive the beneficial bacteria they need to fight off infection by pathogenic bacteria, such as salmonella.

ADD *PRE*BIOTICS, TOO

Prebiotics come from high-fiber plants that feed the microbes in a chicken's gut and help to promote the growth of healthy bacteria in your chicken's digestive system. The beneficial bacteria, also known as probiotics, can't survive without the prebiotics to feed it.

Prebiotics can't be found in a supplement form but in high-fiber foods. Some chicken-safe prebiotic foods include apples, bananas (without peel), barley, berries, cabbage, dandelion greens, garlic, kelp, oats, peas, wheat and yams.

CCESTEP8/STOCK.ADOBE.COM

Probiotics can be mixed with fresh water (above) or food (opposite page, top).

airtight container. Avoid placing probiotics in direct sunlight, especially when mixed with water.

RECOMMENDATIONS

There are many poultry probiotics, so what should you be looking for? Probiotics formatted specifically for chickens should always include lactobacillus. It's one of the most common and beneficial probiotics in a chicken's gut. Buy a probiotic that includes lactobacillus in its ingredients.

When purchasing probiotics, read online reviews to see what other poultry-keepers recommend. While there can be conflicting reviews, look for probiotics that help sick chickens recover. An easy rule to remember is: If it can help the sick, it can help to prevent the healthy from contracting an illness.

Most importantly, when you find a good probiotic, stick with it. While purchasing the cheapest probiotic currently on the market may be tempting, this practice could cause your flock more harm than good. A chicken's digestive tract and immune system can be delicate, and the constant switching of probiotics could make individual birds sick.

AVOIDING PROBIOTICS

Even when fed a proper diet with probiotics, chickens can still become ill and require medication. Never feed probiotics to a chicken taking medication (especially antibiotics) unless directed by your veterinarian.

Once the chicken has completed a round of antibiotics, provide probiotics for six to eight weeks until she has regained her strength. Even if probiotics aren't part of your flock's diet, always administer to a chicken recovering from any illness or injury unless directed otherwise by a qualified veterinarian.

AVOID THE DAIRY

Many backyard flock owners prefer to give their chickens probiotics by feeding yogurt. However, a chicken's body can't process the sugars found in dairy, and it can cause diarrhea. Whenever possible, only feed your chickens probiotics that are made for poultry.

ERIN SNYDER

A HEALTHIER YOU

Today, many backyard flock owners raise their chickens for enjoyment, but the chickens' original purpose was to provide meat, eggs or both. Therefore, we want to ensure our meat and eggs are safe to consume by our family and customers. You may wonder how supplying your chickens with probiotics will equal a healthier you. The reason is that harmful bacteria and yeast in your chicken's gut may lead to human salmonella or E. coli infection.

While the common myth believed by most flock owners is that salmonella comes from ingesting an egg that has come in contact with manure, most cases result from the egg yolk getting contaminated in the ovary. Even though many hens carrying salmonella appear healthy on the outside, their gut is still unhealthy. Therefore, experts suggest that all chickens, whether they appear healthy or not, should consume probiotics daily.

Chickens raised without probiotics are 99% more likely to spread salmonella or E. coli to humans through the consumption of their eggs or meat, then chickens raised on probiotics. With probiotics, you and your family can safely consume eggs and meat without worrying about disease, giving you the peace of mind of a healthy family and flock.

While feeding your chickens probiotics doesn't mean they'll never get sick, it does help to decrease their chances of becoming ill. So, if you want a healthy, long-lived flock that provides you with quality eggs and meat, consider supplementing their diet with probiotics.

Erin Snyder lives in the Northeast with her family and flock of pet chickens.

BOB/STOCK.ADOBE.COM

Probiotics can also just be used during times of stress, such as molting, and after antibiotic treatment.

poultry POINTERS!

We present 75 expert tips for raising chickens from more than a decade of publishing.

BY LESA WILKE

Chickens are fun, easy and so rewarding. But to successfully raise chickens, it's important that you plan carefully, follow basic healthcare practices, feed them properly and select appropriate breeds. These 75 expert tips will help you do just that and make your chicken-keeping operation nearly effortless!

COOP SIZE

1.The best coop size for your flock depends on how many birds you have or want, what breeds you have and whether there's outside run access.

2. Build a larger coop than you believe you'll ever need. Chickens multiply magically!

3. For bantam breeds, plan 2 square feet per bird with outside access or 5 square feet per bird without.

4. Standard size birds need 3 square feet per bird with outside access and 8 square feet per bird if there's no outside access.

5. For heavy breeds, plan 4 square feet per bird with outside access, or 10 square feet per bird without.

COOP LOCATION

6. Before you build, be sure to check local ordinances; some governments may restrict where you can place a chicken coop and run.

7. A coop located near the house is preferable, especially if you'll be collecting eggs daily.

8. Locate chicken housing where there's room for an outside run (sized for at least 10 square feet per chicken).

9. Take advantage of available light, breezes and shade to help stabilize temperatures inside the coop and run.

10. In hot weather regions, this typically means placing the chicken housing in a shaded location.

11. Facing the coop south with protection from northerly winds is often ideal in cold weather areas.

12. Locate the structure downwind from prevailing winds that pass your home to minimize odors and noise.

13. Make water and electricity available at the chicken house. Chickens drink lots of water and carrying it gets old fast. Electricity powers conveniences such as heated waterers,

Chickens that free-range or are fed scratch need grit.

JESSE/STOCK.ADOBE.COM

JPR03/STOCK.ADOBE.COM

A continuous supply of fresh, clean water (above) is critical for chickens.

an automatic door-opener and winter "lights-on" for better egg production.

ACCESS & STORAGE

14. In order to clean, water, feed and care for your chickens, easy access and room to work are essential.

15. Include a human-sized access door and room to stand up inside your chicken house.

16. For smaller coops, include a hinged roof that can be lifted to allow access.

17. Include a separate area within the coop for storing chicken feed, oyster shell, grit and medicinal items.

VENTILATION

18. Chicken housing must be well ventilated year-round to remove the large amounts of moisture, ammonia, dust and heat that chickens generate.

19. The amount and location of vents needed varies as weather conditions change throughout the year. So, create many ventilation options that can be closed or opened as required.

20. In hot weather areas, entire sides of the chicken coop can be constructed to be removed to maintain sufficient ventilation.

21. In areas where hot weather is not a problem, plan 1 square foot of vent opening per 10 square feet of floor space.

22. Cold weather vents should be high up (above roosts) and protected from rain and snow by roof overhangs.

23. Warm weather vents can be lower in the coop so they provide a cooling breeze.

PREDATOR PROTECTION

24. Making the chicken coop and run predator-proof is essential. Many predators consider chickens an excellent meal and will do anything to get them.

25. There should be no coop openings that a predator can get through at night and all windows or vents should be covered with ½-inch hardware cloth (even when open).

26. The small pop-hatch door that chickens use to enter and exit must close securely at night (with them safely inside the coop).

27. Consider an elevated coop to eliminate unwanted entries from below. It will keep predators from burrowing in and provide your chickens shelter from both sun and snow.

FLOORING MATERIAL

28. The common choices in flooring are dirt, concrete or wood. They all have pros and cons that you should consider.

29. Dirt floors are very cost-effective but are difficult to clean. It's also difficult to keep predators or rodents out.

30. Concrete floors prevent predator access and are the easiest to clean, but they're also the most expensive.

31. Wooden floors are inexpensive and work well if the coop is elevated to prevent rot and keep predators out. However, they're difficult to clean. Covering them with linoleum or a protective finish makes cleanup easier.

ROOSTS

32. At nighttime, chickens instinctively sleep off the ground to protect themselves from predators. So, provide your chickens with appropriate roosts.

33. There should be at least 8 inches of roosting space in the coop for each standard size bird and at least 10 inches for heavy breeds.

34. Don't locate waterers, feeders or nest boxes below roosts because chickens do most of their dropping at night while sleeping.

35. Roosts should be placed higher in the coop than the nest boxes so the chickens aren't tempted to sleep in them. (This causes dirty eggs.)

36. Locate roosts at heights from about 1 foot off the coop floor to a couple of feet from the ceiling, but stagger heights so chickens can easily hop from lower to higher roosts.

37. Wide roosts are beneficial in winter so chickens can tuck their feet under their feathers to stay warm. Place 2-by-4 boards so their feet sit on the 4-inch width.

38. Plastic or metal piping isn't suitable for roosts because it's too slippery for the chickens to grip.

NESTING BOXES & MATERIALS

39. Laying hens prefer to lay eggs in a dark, protected place, so appropriately sized nesting boxes are needed in the coop.

40. Nesting boxes should be 12-inch square for standard-size birds or 14-inch square for heavy breeds.

41. Unlike coops and runs, nesting boxes shouldn't be too spacious or multiple birds will crowd into the same box and cause broken eggs.

42. One nesting box for every four hens in the coop is usually sufficient.

43. A nesting box front lip that is about 2 inches high will hold in bedding material, while a sloped roof will prevent the birds from roosting on them.

44. Hemp is an excellent alternative to traditional chicken bedding due to its absorbent and antibacterial properties. It helps reduce odors, provides a comfortable environment for chickens and can be composted after use. Hemp bedding is also more sustainable than other

WIRESTOCK CREATORS/STOCK.ADOBE.COM

Locate roosts at heights from about 1 foot off the coop floor to a couple of feet from the ceiling.

CHELLE129/STOCK.ADOBE.COM

Make the coop and run as predator-proof as possible. Although the above coop looks pretty secure, it doesn't account for digging threats.

options and can be grown without the use of harmful pesticides.

COOP CONVENIENCES

45. Install a coop door opener to automatically let the chickens out every morning and close them up at night. That way, you don't have to rise early to let them out or worry about closing them up at night.

46. Keep waterers from freezing in cold weather by using heated chicken waterers.

47. If you want your girls to continue producing eggs during winter, add artificial lighting to the coop so they receive a minimum of 14 to 16 hours of light throughout the fall and winter months.

HEALTHCARE BASICS

48. Practice biosecurity by restricting access to your property and your birds. Wild birds, new chickens or human visitors may carry diseases that can quickly infect your flock.

49. Make it a priority to observe your flock daily. This will allow you to learn each of your birds' typical behaviors, spot any health issues and appreciate the joy of raising chickens!

50. Provide chicken dust-bathing stations. Chickens need dust baths to get clean and rid themselves of parasites.

51. Use the deep-litter method to maintain a cleaner chicken coop with less work. In addition to being easier, it's also beneficial for your chickens' health. (You can find out more about the deep-litter method at bit.ly/3p6NH71.)

52. Feed your flock pumpkins, melons, cucumbers and squash (members of the *Cucurbitaceae* family) to entertain them.

53. Add culinary herbs and edible flowers to your chickens' coop and run. They contain vitamins, minerals and other components that improve flock health.

FEED & WATER

54. Every bag of chicken feed sold in the U.S. is required to have a nutrition tag specifying the ingredients. Learn to read these labels to control what you feed (think added omega-3s, no soy, etc.).

55. Commercially available feeds are convenient and are expertly formulated to provide ideal nutrients for each type and age of chicken.

56. Up to about 6 weeks of age, feed egg-laying breeds a chick-starter feed and meat chicks a broiler-starter.

57. For chicks, feed should be available 24/7. They grow and create feathers at an incredible rate, so chicks continuously need high levels of nutrients and protein.

58. Medicated feeds are available to help prevent chick losses due to coccidiosis. They can be fed to egg breed chicks up to 16 weeks of age and meat breeds up to five days before slaughter.

59. Chickens need feed that is nutritionally appropriate for their age (chick, pullet, hen, etc.) as well as type (meat, laying or dual-purpose) for optimal health.

60. After 6 weeks of age, switch egg-laying breeds to a pullet-grower and meat breeds to a broiler-finisher.

61. As female chicks approach laying age, their dietary needs change. They don't require as much protein, but they need much higher levels of calcium, phosphorus and vitamin D.

62. Start young hens (egg-laying or dual-purpose breeds) on layer rations at about 18 weeks of age, or when the first egg arrives, whichever comes first.

63. A continuous supply of fresh, clean water is critical for chickens. Chickens won't eat if they are thirsty, which can stunt their growth and inhibit egg production.

64. An adult bird needs to drink two to three times the weight of water that they eat in feed.

65. Egg-laying hens need large amounts of calcium to produce eggshells, so offer free-choice oyster shell or calcium grit. When fed free-choice, hens will self-regulate the amount of calcium they consume.

66. Chickens don't have teeth, so any chickens that free-range or are fed scratch need grit. Grit is the only mechanism a chicken has for grinding its food into pieces small enough to swallow.

BUILD YOUR BEST FLOCK

67. Owning a backyard flock means you get to mix and match chicken breeds to meet your individual goals. Want many eggs, love colorful eggs or prefer quiet birds? There are breeds for all that and more! (See "Final Five" sidebar on the right.)

68. If you want "friendly" chickens, then it's important to handle your birds frequently and give them treats from chick age on. Many breeds will come when called, eat out of your hand and enjoy cuddling and petting.

69. When choosing breeds, consider your climate. Most chicken breeds handle cold, but many struggle in heat. For hot climates, choose breeds that have smaller bodies and large combs (think Mediterranean breeds such as Leghorn). In cold climates, choose larger bodied chicken with smaller combs (think Golden Buff or Barred Rock).

70. Roosters are an individual choice; it all depends on your situation. (Remember: Some locations prohibit them.) The positive aspects are flock protection and fertile eggs, while the negatives are crowing and possible aggression.

No matter where you are in your chicken-raising journey, following the guidelines outlined in this article will lead to a happy, healthy flock that you can be proud of and enjoy for years to come.

Lesa Wilke was a homesteader and writer who loved to inspire others on their journey to more sustainable lifestyles.

JOHN/STOCK.ADOBE.COM

FINAL FIVE!

For our final five tips, we'll look at which breeds to get for what you're looking for.

71. QUIET: If a quiet flock for city or suburbia is your goal, consider the Ameraucana, Australorp, Brahma, Cochin, Java, Orpington, Plymouth Rock, Rhode Island Red, Sussex or Wyandotte breeds.

72. KID FRIENDLY: Larger breeds are usually quite docile and good choices, such as Australorps, Cochins, Orpingtons, Sussex and Wyandottes.

73. EGG LAYING: Top breeds for egg-laying include Australorps, Austra Whites, Golden Comets, Leghorns and Rhode Island Reds.

74. DUAL PURPOSE: Great dual-purpose breeds (good for egg-laying and meat) include the Buckeye, Delaware, Dominique, Plymouth Rock and Rhode Island Red.

75. COLORFUL EGGS: Chickens that produce colorful eggs include Araucana (blue), Ameraucana (blue), Easter Eggers (many colors), Marans (dark chocolate brown), Olive Egger (olive green) and Welsummer (speckled chocolate brown).

General Store

Bring the chickens inside with rooster, hen and chic(k) décor.

compiled by Sarah E. Coleman

Good Egg
Brush
Large to XL Sized Eggs

THE GOODEGG BRUSH is designed with more than 650 silicone nubs to scrub away the nasties clinging to your eggs. The patent-pending nest design allows for easy drainage and passive air flow. Each brush is made from 100% Food-Grade silicone and is dishwasher safe. It comes in standard and large/extra-large egg sizes. www.goodeggstuff.co

THE ADOR1 AUTOMATIC CHICKEN COOP DOOR is easily installed on the wall of a chicken coop. It opens at sunrise and stays open all day. It shuts in the evening when it gets dark. The ADOR1 uses an internal 6-volt lantern battery. www.adorstore.com

HEALTHY HEN
ZEN HEN
Lavender Based Spray

ZEN HEN SOOTHING QUIET TIME SPRAY promotes stress relief, soothes skin and repels bugs, naturally. www.coopsandfeathers.com

BARN & COOP CLEAN is formulated with all-natural hypochlorous acid technology tailored for everyday deep cleans. It doesn't contain any harsh chemicals or leave behind residue and is safe for animals, people and the planet. www.goodsaltlife.com

BARN & COOP
CLEAN

Specially formulated, **KOOP CLEAN™ CHICKEN BEDDING** offers a unique blend of chopped hays and straw, combined with the odor neutralizing ingredient Sweet PDZ™, leaving you with a fresh, dry coop all year round. www.lucernefarms.com

KOOP CLEAN
NATURAL ZEOLITE

VetRx
Veterinary Aid
Promotes Healthy Upper Respiratory Function
100% Natural
VetRx
POULTRY AID

VETRX POULTRY AID for internal and external applications is made with a blend of alcohol, Canada balsam, camphor, oil origanum and oil rosemary, blended in a corn oil base. It provides relief and prevention of colds, roup, scaly legs and eye worm, and as a conditioner for show preparations. www.goodwinol.com

ROOSTER BOOSTERS POULTRY CELL is a vitamin and mineral supplement that boosts poultry health. Iron and amino acids help promote healthy blood building. www.roosterboosterproducts.com

ROOSTER BOOSTER
POULTRY CELL
ROOSTER BOOSTER
POULTRY CELL

SELF-CLEANING
CHICKEN
WATERER
Cowboy's
GAMEWASHER.COM

COWBOY'S SELF CLEANING CHICKEN WATERER keeps chickens' water fresh and clean with 4 side-mounted poultry nipples. The waterer has a restricted nozzle that blasts water across the bottom like a pressure washer pushing dirt and debris up out of the drain at the top. www.gamewasher.com

Dr Naylor
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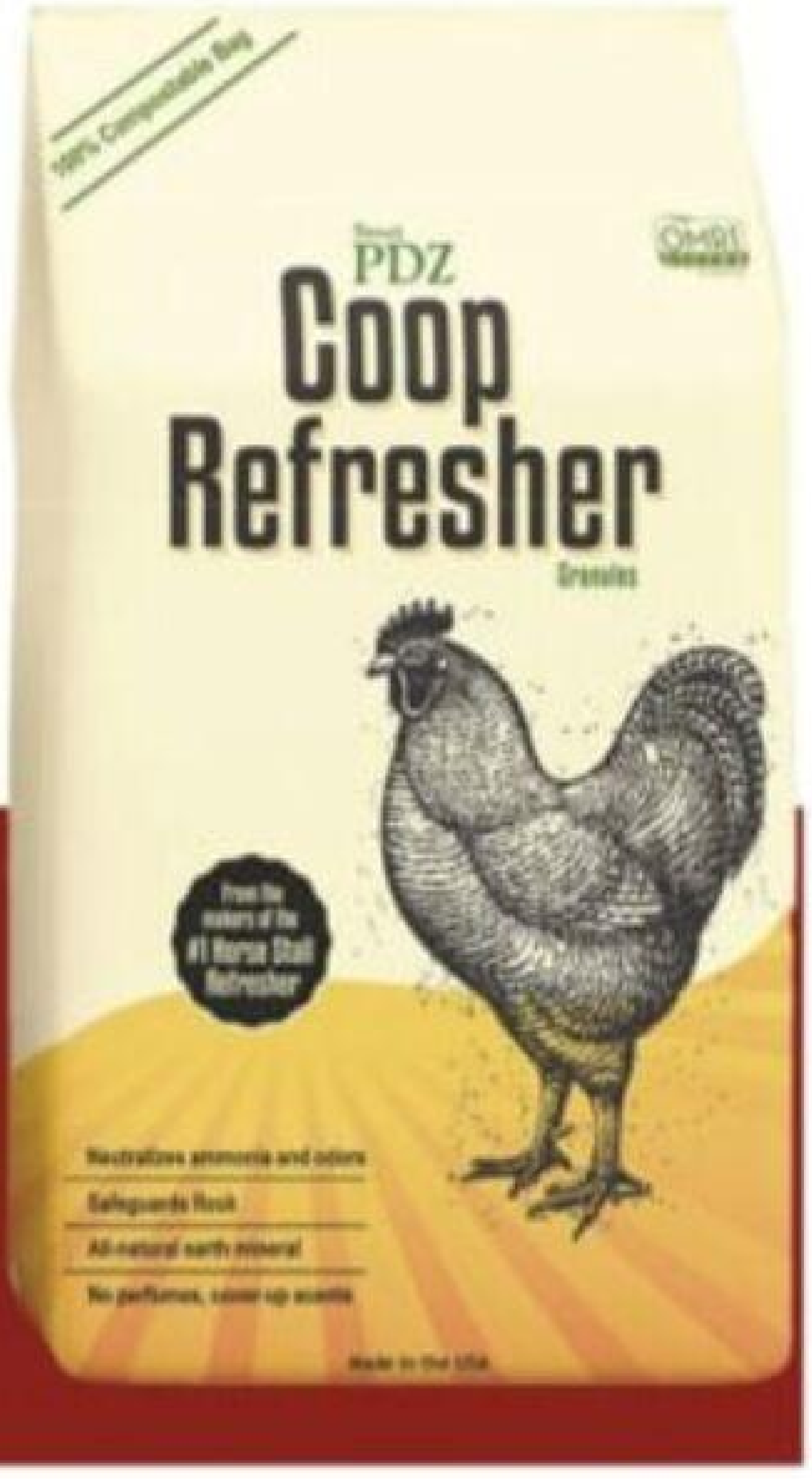
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Happy & Healthy

Help your flock thrive with these attentive tips.

BY KRISTINA MERCEDES URQUHART

JACQUELINE ANDERS/STOCK.ADOBE.COM

To become a chicken keeper is to become a bit of a detective. As animals of prey whose survival is tied to a strong social lifestyle, chickens don't like anyone to know when they're sick.

In a flock, if a hen lags behind or looks weak, she makes an easy target for predators. If she displays signs of illness or lameness and the flock takes notice, they may well cannibalize or inflict further damage as a way to eliminate her from the group. While this may sound harsh, this is how chickens have survived when absolutely everything wants to eat them, from the tiniest mite to those with sharp teeth and talons. And since these traits will be apparent in even the tiniest backyard flock, it helps to keep a keen eye and a sharp sense as their keeper.

Chickens are incredibly easy animals to care for if you get them set up with all they need. As you'll read in a moment, I wholeheartedly believe that awareness and prevention are the two most reliable and inexpensive "medicines" of all, and that with these two tools, nearly every chicken ailment can be avoided.

CHICKEN HEALTH & WELLNESS

The chicken keeper's first tool — awareness — is largely about observation. What do you see when you watch your chickens? How do they act? How do they interact with each other?

At first glance, your family of birds may appear to be ignoring each other, simply pecking around, eating, drinking, laying eggs and grooming. If you look closely, you may notice subtle (or not so subtle) gestures between two or more birds as they communicate through vocal sounds, body language and pecks, giving you a sense of hierarchy.

If you watch even more closely, you'll get to know their individual personalities, where they fit on the hierarchical totem pole, and what their "normal" behavior looks like. How do they act when all is well? In order to be aware of any changes in your flock, you'll first need this frame of reference.

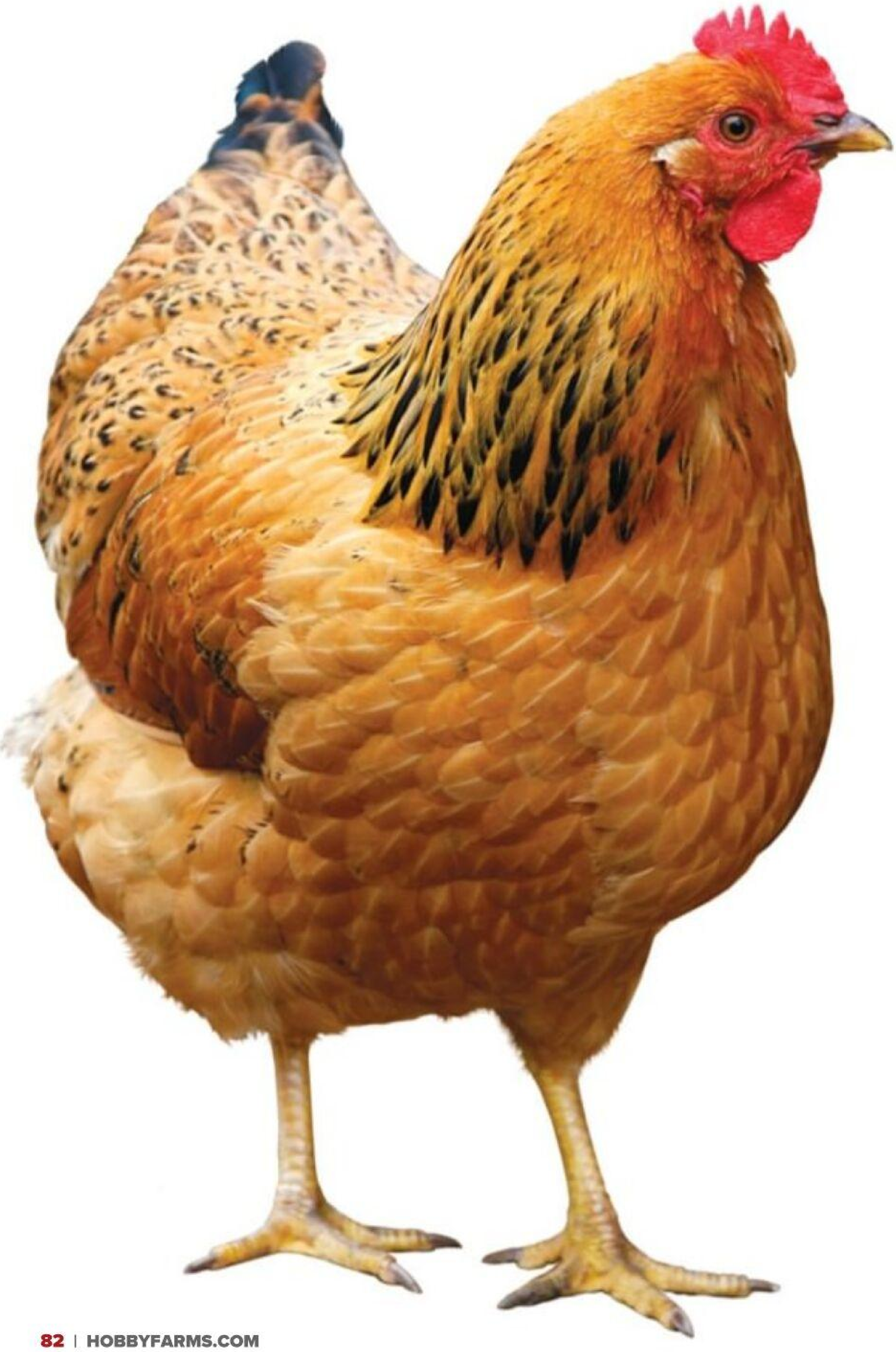
THE HEALTHY CHICKEN

A healthy bird is aware and alert. Her body posture is erect, she has a robust appearance, and she carries herself confidently. She moves easily and freely and goes about her normal chicken behaviors — scratching and digging in the dirt, pecking and picking at what she finds, laying as often as her age and breed dictate, roosting at night, and regularly dust-bathing. She makes noises based on her activities, such as clucking and

All chickens, these Silkies included, will attempt to hide any ailment from predators and one another.

cooing while foraging or singing her "hen song" after laying an egg. She can easily move her body, flap her wings, and fly up to a perch or roost. Her behavior should be typical of her personality, submissive if she is lower in the flock's hierarchy or more dominant if she is an alpha.

For appearance's sake, a healthy hen is rather beautiful. Her feathers are shiny, her eyes are bright and clear, and her comb and wattle are a rich, deep red (unless her breed sports a different color). Her feathers lie flat against her body (unless she's a frizzled variety), her shanks are yellow or slate (depending on her breed, of course), and she is fully feathered (unless she is molting).



A healthy chicken has a robust appearance and is aware and alert.

A healthy bird eats and drinks regularly throughout the day, her weight remains steady, and her droppings are fairly uniform. Droppings are a pretty reliable barometer of chicken health, so note any changes in appearance or odor. Firm, light brown to grayish green droppings with a white crest (the urine salts) are normal, with an occasional "cecal" dropping that resembles molasses in texture and color.

THE SICK CHICKEN

Identifying a sick chicken is a bit harder than identifying a healthy one. For starters, a sick chicken may still appear healthy on the outside and to the naked eye. That is why it is so important to regularly monitor your birds and know their typical personalities. When something is amiss, you'll likely spot it based on behavior rather than on appearances.

With that said, a sick chicken may still appear unkempt. Her body posture may lack strength, and she may sit idly for long periods of time. (Do not confuse this with broodiness; a broody chicken will be alert, making healthy vocalizations and likely defensive of her nest.)

A sick bird's eyes may appear glazed and unfocused, and her comb, wattle, legs and feathers may appear dull. She may not dust-bathe or preen and groom herself.

A sick chicken usually stops laying eggs or lays eggs with severe deformities. She may stand very still at times, refuse to eat or drink, or lack the strength to get to the feeder or water font altogether. A sick chicken may puff up her feathers, may have clear leg or wing deformities, or may have obvious external pests. Droppings may change in color or consistency.

A sick or injured chicken may drag a limb or bleed. If her injury is very apparent to you, rest assured it's very apparent to her flock mates. An obviously injured or ill chicken will likely fall prey to flock cannibalism. If you see excessive bullying, take this as a sign to investigate the health of the bullied chicken right away.

Finally, a sick bird will just not be herself. If you keep a small flock of laying hens and take the time to know each one's unique personality, quirks and mannerisms, you can easily use this knowledge as a reference point on health.

Without adequate water, not only will egg production suffer, but a flock's collective health will also decline rapidly.

THE BASICS OF PREVENTION

The second tool in the chicken keeper's arsenal is prevention. How you tend to your flock, set up their housing, and care for them day to day will largely determine how well you can manage the spread of unwanted pests and illness in the long run.

BIOSECURITY. These measures are the ones you take as keeper to prevent the spread of pests and disease in your flock. Here are some ways to practice good biosecurity:

Exercise caution when adding new birds to a flock and use quarantine methods. The same goes for "chicken sitting" any outside birds.

Have a designated pair of muck boots or Wellies for your coop and run and wear them only for chicken chores. Have a pair of "chicken boots" for each member of your family, and create a rule that children are only to wear them — and must wear them — while working with or caring for the flock. Wash hands and change clothes between handling birds from separate flocks.

SHELTER. Adequate protection from predators and the elements is another basic tenet of keeping a healthy flock. Chickens aren't doing very well if foxes are regularly eating them. Your flock's housing should be a well-ventilated shelter that is relatively clean (realistically, though, chickens make a mess of any structure they live in, so take the term "clean" here with a grain of salt). Fresh, dry bedding is a must, and waste should be removed periodically. Also, daily egg collection will avoid all manner of potential pests, predators and cannibalism, such as egg eating.

FOOD, WATER & SUPPLEMENTS. Your flock should have access to fresh water, all day, every day, year-round. Water keeps your birds well hydrated, of course, but it keeps them laying, too. An egg is about 74% water, meaning it requires quite a bit of water just to produce it. Without water, not only will egg production suffer, but a flock's collective health will also decline rapidly.

Your flock should also have access to age-appropriate food at all times. Supplements, such as grit and oyster shell, are critical for good digestion and a functioning reproductive system, respectively. Just having those two supplements available to your flock will stave off most kinds of digestive and reproductive issues.

IDENTIFYING STRESS

We could all do with a lot less stress, and poultry are no different. They respond to stress in much the same way we do, with a loss of appetite, lowered immune function and increased fatigue, to name a few symptoms. How we tend to our flocks determines to a large extent how much stress they're under.

Birds respond to stress in much the same way we do, with a loss of appetite, lowered immune function and increased fatigue.

Whether from fear, overcrowding, the addition of new birds to the flock, or simply boredom, stress can manifest itself in unpleasant and unhealthy ways. Fear, for instance, is a relatively common experience for chickens.

As creatures of prey, they must constantly be on the alert for danger. Whether the fear is from a legitimate source, such as a predator, or from an imagined threat, such as a loud noise, the stress response is the same.

Severe overcrowding or the addition of new birds to an established flock can lead to picking, pecking and cannibalism of varying degrees, from minor bullying to fatal wounds. Boredom itself is rare in chickens; if a flock is confined to a small space without room to do what they naturally do, "boredom" ends up looking a lot like cannibalism.

REDUCING TENSION

Reducing your flock's stress first means knowing their nature (as we just learned) and then adjusting your activities accordingly. Chickens are not picky. They don't ask for much. If you simply allow them to tap into their natural behavior and express these traits, they will be adequately entertained and quite content. Here are a few ways to do that.

Many issues of cannibalism in an otherwise healthy flock can be warded off by providing space to roam and giving the freedom to be a chicken. Of course, this means having enough physical room in the coop or enclosure. But this also means having a place to dust-bathe and scratch around, doing the things that chickens do.

With enough space, chickens feel less territorial; submissive birds have the ability to move away from any roosters or alpha hens that want to assert their dominance. In other words, with the ability to focus attention on normal chicken behaviors (like grooming and foraging), less attention will be focused on flock mates.

The stress caused by imminent predators is hard to control in most aspects, but you do your part by providing a safe coop and making sure the birds are securely locked up each evening.

Protect your flock from hawks and other predators.

Take precautions against predators, such as burying perimeter fencing or using electric fencing. If your town or city allows it, consider adding a rooster to your flock; aside from fertilization, a rooster's main occupation is security guard. A good rooster will be willing to risk his life protecting his flock, making the hens feel more secure day to day.

Finally, minimize noises in and around your birds' housing when they're inside. Schedule mowing, weed whacking, leaf blowing, and other outdoor maintenance when your flock is free ranging or otherwise occupied. If they can comfortably move far away from the noise, they will be less frightened. Especially try to avoid such chores early in the morning since the stress of loud noises may impact a hen's egg laying.

DUST-BATHING

The health of a chicken's feathers can greatly influence her overall well-being and her ability to ward off external pests. As a keeper of chickens, it's your job to give your flock the opportunity and space they need to maintain pristine plumage.

Chickens maintain their feathers' good health by taking dust baths, an entertaining series of romps in the dirt (for chicken and human alike). After digging a shallow hole, your bird will fluff herself sideways, tossing dirt and sand deep down to the base of her feathers. Once there, the dirt will asphyxiate pests that may prey on her. After bathing, the bird preens.

She sources oil from the uropygial gland (also called the preen gland) located at the base of her tail and distributes this oil among her feathers with her beak. This oil creates sheen, promotes health and ensures water resistance in the feathers. Birds that are debeaked are unable to properly gather oil and preen, yet another reason not to buy debeaked chickens or to debeak them — ever.

Though a flock may often dust-bathe and preen in pairs or all together, each individual chicken will self-regulate her grooming patterns and hygiene, repeating the dust bath and preening only as often as she finds necessary.

Dust-bathing and preening are essential to good health, and as the flock's keeper, you can provide optimum space and material for them to bathe in. If your birds lack an area in which to dust-bathe (or if you're tired of their using your potted petunias), create an area yourself using the instructions left.

DUST BATH

Help your hens by creating a dust bath for them, so they can keep busy and keep clean.

TOOLS & MATERIALS

- builder's sand (available at local hardware stores)
- wood fireplace ash
- 100% food-grade diatomaceous earth (DE)
- 1 miniature raised bed, galvanized steel basin or low plastic bin (minimum size: 18-by-24 inches by 10 inches deep or more)

INSTRUCTIONS

Combine equal parts sand, wood fireplace ash and DE, and mix thoroughly. Pour mix into your chosen container, leaving about 4 inches of headspace between mix and rim of container (to catch excess as it is tossed).

Replace mix as needed, so there is always at least 6 inches of material in container. Offer this dust-bathing area to your flock all day, every day, all year long.

MOLTING

When I first began raising chickens, a farming friend and poultry guru warned me to keep an eye out for my flock's first molt, probably in an attempt to spare me the inevitable panic when I saw my birds in such a state. Unkempt, disheveled and bedraggled birds are what I found that first November, and even with a seasoned poultry keeper's warning, the sight was shocking. Luckily, there was no need for me to worry, and you shouldn't either. Molting may look off-putting at first glance, but it's a natural, normal, painless part of life with chickens.

WHAT IT IS. Molting is the annual process of shedding and regrowing feathers that all birds go through. Molting usually happens pretty predictably in autumn, so there's plenty of time to prepare.

Your chickens will typically molt during their second fall. The shorter day length signals the bird's system to prepare for the coming cooler weather and to replenish plumage. Molting can begin anywhere from late summer to early winter and may take between 4 to 12 weeks to complete, depending on breed, age, and the health and vigor of your individual birds. Each one is different.

Though molting is triggered by waning daylight hours, it can also be triggered by stressful situations, such as going without food or water for a period of time. To safeguard against unnecessarily prompting a molt, make sure your flock has the "basics" covered. Expect your birds to molt annually. Your best layers and healthiest birds tend to molt quickly and efficiently, returning to laying within a few weeks.

It's important to remember that molting is normal, so don't be alarmed when you see the feathers fly. If birds have adequate space in their coop, run, or pasture, molting will not induce pecking or other cannibalistic behaviors. If your flock experiences extreme feather picking and pecking (evidenced by drawing blood), however, they probably need more space. Other than a few small behavioral differences (more on those to come), your flock should act normally during the molt.

WHAT IT LOOKS LIKE. Just before molting, a bird's plumage becomes dull, losing its sheen as the old feathers lose health. Shedding begins at the head and works gradually back toward the tail. Each bird has her own molting "style"—some lose all plumage at once; others lose feathers so gradually and subtly, you'll wonder if they're molting at all. As the process unfolds, so to speak, you will see small pinfeathers emerging from areas around the chicken's body as new plumage grows; these appear as tiny quills at first and eventually open to reveal the fresh, new feathers.

The easiest way to spot if a molt is underway is to take a look around the coop. If you find feathers everywhere and have ruled out a predator attack, you can probably safely assume your flock is molting.

WHAT YOU CAN DO ABOUT IT. Molting is really hard work. Regrowing feathers requires a lot of energy, so expect to see a dramatic drop in egg production for a while. The hen's body pulls energy away from the reproductive system and puts it toward the growth of new feathers (as well she should; feathers are approximately 85% protein).

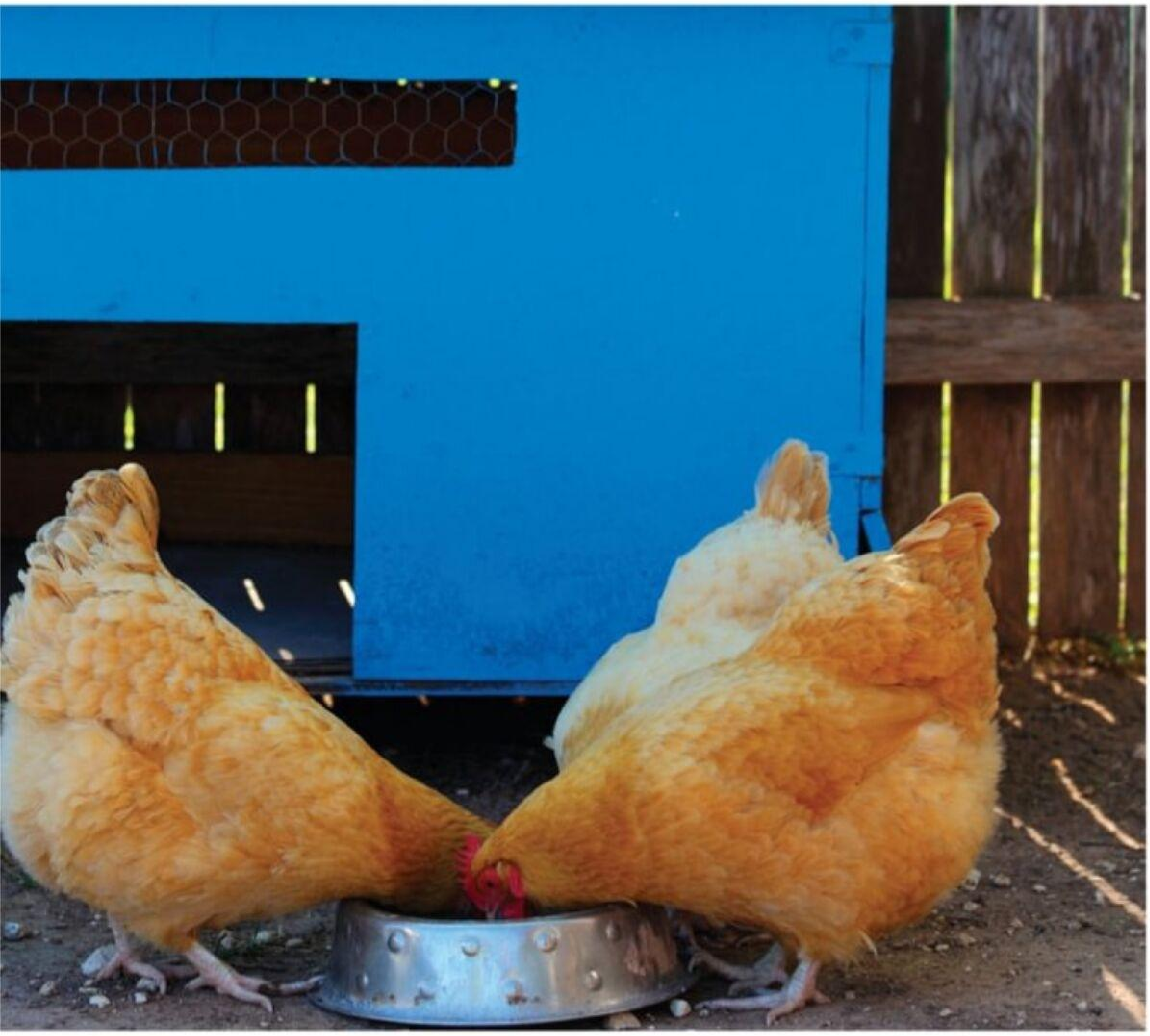
While this can be disappointing for the keeper of a laying flock, keep in mind that your bird's overall health is critical to all future egg production, and feather health is of the utmost importance. With healthy feathers, adequate dust-bathing and preening opportunities, your bird will be able to keep mites, lice, and other external pests at bay.

SO HOW CAN YOU HELP? Consider offering supplements that contain a high percentage of protein. Mealworms are a fun treat and help to build trust with your birds. Kids will love to hand-feed treats.

Better yet, allow your flock extra free-range time to find their own buggy source of protein. Some flock owners switch to a commercial broiler (meat bird) feed during a molt. Others give canned cat food, canned tuna, cooked ground beef, or other meat-based protein to their flocks during a molt as a supplement. This practice is fine in moderation but don't offer so much that your chickens turn up their beaks at regular feed. The balanced commercial layer ration should still be the primary source of nutrients in their diet.

Further support your birds' molt by reducing their level of stress. In addition to taking preventive precautions, consider rescheduling shows or other public events with your molting birds — chances are you won't win any ribbons with your birds looking the way they do anyway.

Kristina Mercedes Urquhart writes for Chickens *magazine and is the author of* The Suburban Chicken. *She lives on a homestead in North Carolina.*



Keep your feeding and watering areas clean. This will help to keep disease and parasites at bay.

Your Best VET

Even with poultry popularity soaring, finding a veterinarian for your chickens is not easy task.

BY AUDREY PAVIA

All is well in your coop. Your birds are bright-eyed, active and eating everything you give them. You have little reason to think about what you'll do if one of your birds gets sick — until it happens.

If you keep chickens, the day will come when you go out to check on your flock and find a bird that's not doing well. Maybe she's lethargic and not interested in food. Maybe she's not walking right. Or maybe she has an open wound that came from another hen or even a predator. If you live in an urban or suburban area, small-animal vets are plentiful, but where do you take a sick chicken?

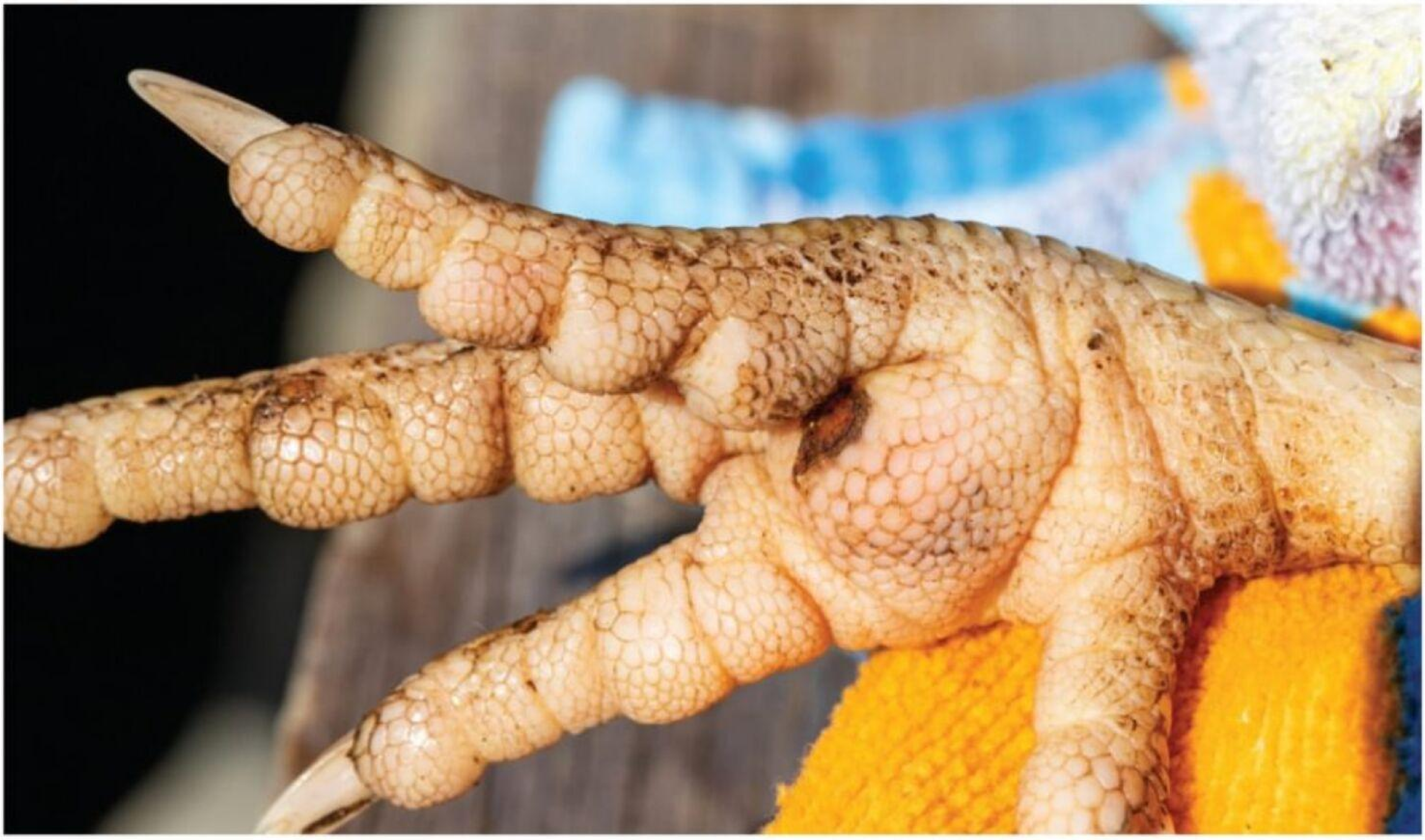
CHICKENS NEED VETS

Backyard-flock owners often opt to try to treat their birds at home and don't seek out the advice of a veterinarian. This is often not in the best interest of the birds, according to veterinarians who specialize in poultry care.

In a 2014 study in the journal Poultry Science, only 16% to 24% of backyard-chicken owners pursued veterinary care for their birds, according to avian veterinarian Nick Kirk of Migratory Avian Services in Nashville, Tennessee. Only 18.8% of owners in the same study sought information from veterinarians, in comparison to 87.4% seeking information on the internet.

"In contrast to those numbers, there was a lack of knowledge of common diseases contracted by chickens," he says. "These include avian influenza, Marek's disease and exotic Newcastle disease. Avian influenza and exotic Newcastle disease are zoonotic, or can be transmitted to humans. Avian influenza has just recently been in the news, and owners with chickens should be very aware of the potential effects on their flocks as well as their human family members.

LIGHTFIELDSTUDIOS/STOCK.ADOBE.COM



CHAD ROBERTSON/STOCK.ADOBE.COM

Bumblefoot, a painful process within the foot of a chicken, can require surgical intervention that should only be preformed by a veterinarian with experience in avian medicine.

This is where an avian veterinarian is important to have associated with your flock. We are aware of multiple diseases outside of these common ones and keep up to date with what is going on locally and nationally."

In addition to these common diseases, chickens are affected by multiple conditions that aren't suitable for diagnosis or treatment by someone without a veterinary license. "For example, there are multiple websites that will give you 'at home' therapies for bumblefoot," Kirk says. "Bumblefoot is a painful process within the foot of a chicken, and if severe, needs surgical intervention. Only a veterinarian with experience in avian medicine would be able to properly diagnose and treat this condition in a humane manner."

For Crystal Matt, an associate veterinarian at the Avian and Exotic Animal Clinic of Indianapolis, Indiana, it's important for chicken owners to use a veterinarian for several reasons.

"The primary reason is that an owner's assumption about what might be happening with their bird is often incorrect," she says. "The majority of egg-binding or sour crop cases presented to me end up being far more complicated than that."

As an example, Matt explains that sour crop develops when the crop isn't emptying normally. Owners assume this is a crop problem when it's usually something completely different that is simply causing a backup into the crop.

"I've seen delayed crop emptying from tons of different diseases, like metal poisoning, reproductive diseases, heart failure and even one chicken that ate an entire towel!" she says.

Matt has also seen dozens of cases of well-intentioned owners trying to treat medical problems on their own — such as cutting open bumblefoot, giving medications from other pets, even trying to pull out an egg — that end up causing far worse damage to the bird.

"There is a lot of misinformation on the internet that often leads to delayed medical care, worsening of the underlying condition, or additional problems that weren't present initially," she says.

Finally, birds are pros at hiding signs of illness, which is why it's a good idea to have a veterinarian exam your birds, even when they appear healthy.

"As prey animals, they naturally try to act like everything is perfectly fine until they absolutely can't hide it any longer," Matt says. "This means that if an owner

Backyard-flock owners often opt to try to treat their birds at home and don't seek out the advice of a veterinarian. This is often not in the best interest of the birds, according to veterinarians who specialize in poultry care.

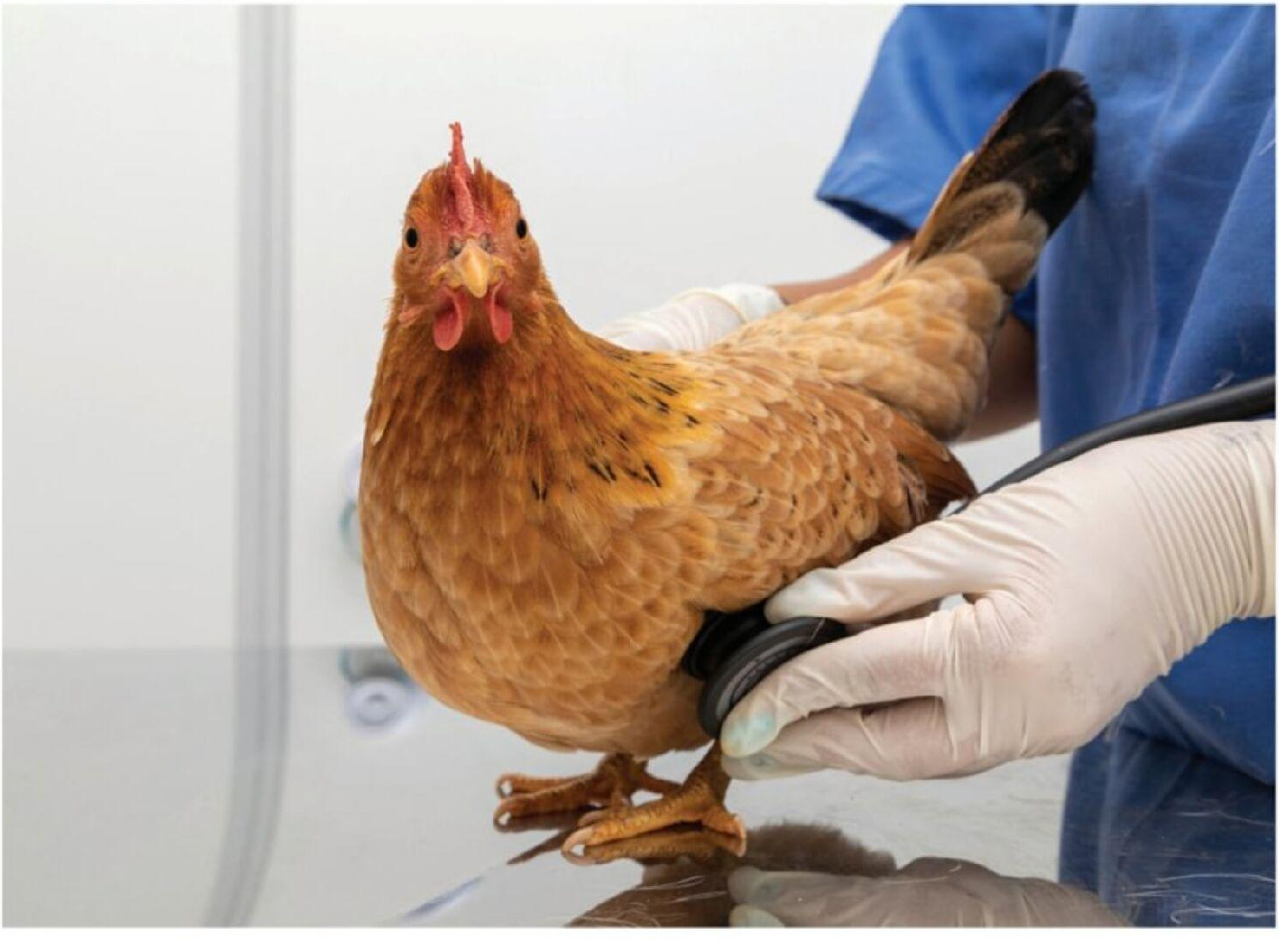
is seeing signs of illness, it's likely far worse than the bird is letting on. Routine health exams are an important part of keeping a healthy flock."

SPECIAL TRAINING

If you have a chicken in need of vet care, ideally you'll take your bird to a veterinarian who is specially trained in avian medicine. Avian specialists are board-certified with the American Board of Veterinary Practitioners as Avian Practice Diplomates, and with good reason. They have studied bird anatomy and know the ins and outs of what can affect the health of poultry.

Board-certified avian and exotics veterinarian Cheryl Greenacre is a professor of Avian and Zoological Medicine at the University of Tennessee College of Veterinary Medicine. She says that it's important to seek out the services of a boarded veterinarian to treat your companion poultry as birds are very different from dogs, cats and horses, and require knowledge of the avian anatomy, physiology and disease processes that are unique to birds.

Greenacre goes on to say that any licensed veterinarian can legally examine, diagnose and treat a chicken or other poultry, but many veterinary



Finding an avian vet can be challenging for many backyard-flock owners.

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ЮЛИЯ ЗАВАЛИШИНА/STOCK.ADOBE.COM

If there are no avian vets in your area, ask local clinics if they are comfortable treating birds (above).

A vet not properly trained in avian medicine can misinterpret radiographs and X-rays (above right).

schools don't teach avian medicine as part of their curriculum.

"Some veterinarians have additional experience most likely advertised as an interest in treating poultry, or they are a member of the Association of Avian Veterinarians and have obtained continuing education on poultry and other birds beyond what they learned in veterinary school," she says.

Jessica Grodio is a house-call veterinarian with Avian Home Veterinary Care, serving the Duchess County, New York area. She notes that at most — or at possibly all — veterinary schools in the United States, students receive very little avian-specific training, unless they intentionally search for this experience or take elective courses offered on birds and exotics.

"The average veterinarian in private practice who sees cats and dogs, unless they have specifically sought out numerous continuing education opportunities, may have a very limited knowledge of avian medicine," she says. "Birds have very different anatomy than mammals and often the dosages of medications we use in birds are different than the dosages we use in mammals. So it is important for vets to have a good understanding of avian anatomy and medicine if they decide to offer services to birds."

Grodio has seen vets not properly trained in avian medicine misinterpret radiographs, prescribe specific antibiotics to chickens that are prohibited in food animals and give birds medications that avian vets may not regularly use.

"For example, steroids can be severely immunosuppressive in birds, so they should be used with extreme caution and only for very good reasons," she says.

PLAN B

Given these realities, backyard chicken-owners should consult a board-certified avian veterinary specialist when their birds get sick. But what if you can't find a vet like this in your area?

"If there are still no avian vets in your area, try asking local clinics if they are comfortable treating birds," Matt says. "Ideally, this should be done before problems arise. It is also important to find a vet willing to see birds on

FIND A SPECIALIST

Although board-certified avian vets can be difficult to find, it's worth looking to see if one is located within driving distance of your home. You can locate American Board of Veterinary Practitioners, Avian Practice Diplomates in the United States by using the AVPB "Find an ABVP Specialist" tool at **www.abvp.com/find-an-abvp-specialist**.

You can also look for vets with an interest in treating poultry in the Association of Avian Veterinarians database located online at **www.aav.org/FindAVet**.

an after-hours or emergency basis, as most dog and cat clinics are unwilling. Universities with vet schools may have exotics programs and are often a reliable source for both emergency and routine care. You can also talk to your local pet store for ideas. If they have birds for sale, they should have a vet willing to see the birds if they get sick."

If a boarded veterinarian is unavailable in your area, at least seek the services of someone who has a demonstrated interest in avian and poultry medicine. "Always establish a relationship with a veterinarian in your area prior to needing one in an emergency, as many emergency practices are not familiar with birds," Greenacre says.

When you find a vet who expresses an interest in treating your chicken but isn't board-certified, inquire about what type of training the veterinarian has received in avian medicine.

"Many veterinarians are members of the Association of Avian Veterinarians, which is great, as that organization provides continuing education opportunities, client education handouts, etc., to its veterinary members," Grodio says. "But keep in mind, a veterinarian only needs to pay annual dues to be a member of that organization. Being a member is certainly not equivalent to going through a two- to three-year avian residency, sitting for a difficult avian board exam and becoming board-certified. But being a member does show that the veterinarian at least has an interest in birds."

Kirk agrees that finding an avian vet can be challenging for many backyard-flock owners but recommends reaching out to the veterinarian you use for your other animals for a referral.

"Get recommendations from your primary care veterinarian on vets in your area who will see chickens," he says. "You should have an established relationship with a veterinarian, preferably an avian veterinarian, prior to any problems occur within your flock."

Grodio recommends also reaching out to a specialist outside your area to work with your local vet. "Some avian specialists may be willing to offer consulting services," she says. "They may be able to consult with your local vet to review X-rays and lab work, and discuss your bird's case in more detail, to help your vet develop a treatment plan."

Audrey Pavia is a freelance writer and author of more than 20 books about animals. She shares her home in Norco, California, with two horses, two dogs, two cats and a flock of bantams.

The average veterinarian in private practice mostly sees cats and dogs and probably has a very limited knowledge of avian medicine.

MERRIMONC/STOCK.ADOBE.COM

10 Top TIPS

by Kristina Mercedes Urquhart

For a Healthy Flock

Having a healthy chicken flock boils down to following a few, simple protocols. Let's explore each, one by one.

1. GOOD SANITATION

Practicing good sanitation starts in the coop, where chickens spend at least half of their time roosting and laying eggs. Housing must include shelter from weather and predators, a proper roosting space (chickens prefer to roost to sleep) and nest boxes in which to lay eggs. Each of these areas must meet the size, shape and environmental requirements needed for best health.

Start with a coop that is the proper size for your flock or even slightly bigger (because we chicken-keepers notoriously love to add to our flocks). Build it or renovate it with chickens in mind, keeping nest boxes low to the ground, roosts elevated slightly and good insulation with proper ventilation. Create locking doors and windows secured with hardware cloth to keep predators from getting into the coop when birds are most vulnerable: at dusk, dawn and overnight. Nest boxes should be dark, dry, safe and soft, and eggs should be collected regularly to keep from inciting egg-eating behaviors.

You needn't give your chickens free run of the yard all day, but they should have some daily access to sun and grass.

OREGON DEPARTMENT OF AGRICULTURE/FLICKR

Place a safe bedding on the floor of the coop, such as nontoxic sand, pine shavings or another hardwood shaving. Clean and monitor this regularly. (Some methods require cleaning only once a year, but you should fully research these ahead of time.)

Keeping the coop clean, regularly maintained and inspected for security breaches or hazards goes a long way toward encouraging good health for you birds.

2. BIOSECURITY

Did you know that you can transfer disease from one chicken to another from the dirt on the soles of your shoes? It's true, and avian diseases and pests can spread rapidly and become dangerous very quickly.

When you visit another farm, homestead or coop; when you visit the county fair; or when you purchase new birds for your own flock, wear booties over your footwear or wash/change it before re-entering your own coop and run. You simply can't be too prudent when it comes to biosecurity and your own flock.

If you do add birds to your flock, extend these biosecurity measures by quarantining any new potential birds for four weeks in an area away from your existing flock. Monitor for illness or disease before slowly introducing them.

3. QUALITY NUTRITION

Good food is crucial to good health. We know this for ourselves, and it's true for our birds as well. The medicine is simple: Purchase the highest quality feed you can afford for your flock's daily ration.

For many, this means organic chicken feed formulated specifically for the age and stage of your bird or flock. Enormous strides have been made in chicken feed for sensitive egg-eaters. I learned my youngest daughter had an egg and corn allergy as an infant. When we started purchasing corn-free feed for our chickens, she was able to eat their eggs. You are what you eat, after all.

4. FRESH WATER

Quite possibly the single most critical element, next to safety, is water. It's simple: Provide your birds with fresh water daily. You won't need to change out the water daily, especially if you have an expertly designed water font system that keeps the water high and prevents birds from perching — and therefore, defecating — in the water. But check it every day, and change it as needed for your flock, font and setup.

6. DUST-BATHING

Chickens bathe themselves in a specific way, called "dust bathing." Chickens recline in the dirt, flop around, then toss dirt up and around their backs and into their feathers. It's fun to watch and probably gratifying for the chicken.

Chickens wrap up the grooming session with a preening activity, sourcing a preen oil from a gland at the base of the tail. The dirt prevents mites and lice from burrowing and making a home on the bird's body, and the preening improves feather health until the next molt.

6. EXPRESSING "CHICKENESS"

Let a chicken be a chicken. They want to range and forage for food and spend much of their day doing so. The more freedom you can offer them, including a variety of environments to explore, hunt and dust bathe, the happier they'll be.

7. TAKE CARE

Before buying your chickens, call the vets around your area and see which, if any, are specialized avian or "exotic" veterinarians. Ask about their on-call policies, hours and consultation/emergency rates. You never know when you'll need to call or make a visit, so be prepared in advance if something bad happens.

8. SUPPLEMENTS

Supplements are an easy way to help keep your birds in optimum health, especially egg-layers. Domestic fowl have been bred to produce an abundance of eggs, meat or both, and because of this, they require an abundance of very specific supplements, such as calcium.

Supplement your birds' diets with oyster shells for added calcium and grit for aiding digestion; both are usually available wherever other chicken-keeping and farming supplies are sold. You can also purchase them easily online.

9. SAFETY

Chickens have many natural predators, including raccoons, foxes, raptors, bears, weasels and, most commonly, the domestic dog. Providing secure housing and a safe run or fenced enclosure is of the utmost importance.

Research the predators in your area. Get to know each one, including the signs of their presence, tracks, the times of day they're active and other relevant behavior, then create safety measures accordingly.

10. BE EDUCATED

Take the time to learn about chicken health. Research the ailments, diseases and illnesses that are common and take measures accordingly.

Some people like to vaccinate for diseases such as Marek's; vaccines are available through many hatcheries upon ordering. Others like to give their chicks medicated feed to help ward off coccidiosis. Learn how to spot mites, know the signs of reproductive ailments such as egg binding and, most importantly, check on your chickens daily so you can detect even slight changes.

Even small health issues, such as respiratory ailments, can grow serious if not watched. Learn, to the best of your abilities, what constitutes a "healthy" chicken, and you'll know when to spot problems. Our birds rely on us to provide for them, and in turn, they'll keep us flush with eggs and constant entertainment.

Kristina Mercedes Urquhart is the author of The Suburban Chicken.

EGG Song

For the first month, **new chicks require 6 inches of space per chick**. For the second month, they'll need 1 square foot. **After the first two months, they'll require 2 square feet** until you move them into the coop, typically around 8 to 12 weeks.

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